# Send for Book Catalogue and Illustrated Price

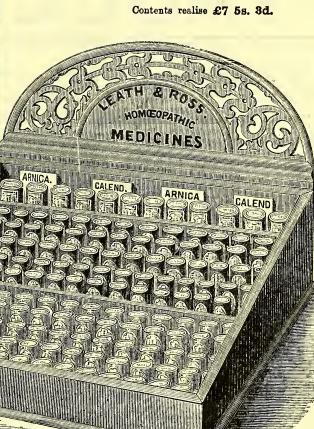
# MEOPATHIC PHARMACIES

9 VERE STREET, W., And 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

ESTABLISHED 1835.

TRADE NOTICE-10 % Discount for Cash with Orders.

OUR £4 4s. AGENTS' CASE,



# WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

E 6-		TO ACCOUNT.	FOR CASH.	TO ACCOUNT.	
LOBULES Sixpenny Tubes	***	3/0 dos.	2/9 dos.	PILULES. — Sixpenny Bottles 3/0 dox.	2/9 doz.
Ninepenny ,,		4/6 ,,	4/1 ,,	Kinepenny ,, 4/6 ,,	4/1 ,,
Shilling	•••	6/0 ,,	5/5 ,,	Shilling ,, 6/0 ,,	5/ ,,
NCTURES Sixpenny Bottles			2/9	TRITURATIONS Sixpenny Bottles 4/0 ,,	3/7 ,,
Winemann	•••	4/6 ,,	4/1 ,,	Ninepenny ,, 4/6 ,,	4/1 ,,
Chilling		810	K/K	Shilling ,, 6/0 ,,	5/5 ,,
puring 11	•••	0/0 ,,	9/0 ,,		

Liberal supply of printed matter to Agents, also Showcards, Transparencies, &c.

Upwards of 1,600 of these Cases have been sent out.

# 14 PRIZE MEDALS,

Including Highest Awards at New York, 1874; Philadelphia, 1876; Paris, 1878; International Medical (London), 1881; and the Healtheries (London), 1884. The only article which has received any official recognition anywhere.

# "SELINE"

substitutes, in that it is made from a different base (American Crude Petroleum) and by a different process, and no acids are used in its manufacture. It is not a distillate, contains no paraffine, is not crystalline in its structure, and does not separate upon cooling, after being heated indefinitely. It is simply a concentrated Jelly of Petroleum, purified by repeated filtrations through bone black.

To compare "Vaseline" with a distillate of Petroleum is equivalent to testing the quality of butter by experimenting with cheese.

originated by, and is registered all over the world as the Trade Mark of, this Company for their Emollient, Remedial, Toilet, and other preparations of Petroleum; and the Trade are cautioned against using the said word in connection with any goods not manufactured by us.

Reference is asked to notice of judgment obtained by this Company against infringers of their Trade Word, "Vaseline," published in The Chemist and Druggist of December 15, 1884, and previously.

Also to the Circular in January issue (facing page 164), which gives the exact style of the genuine packages of the Medicinal, Toilet, and Household Preparations.

# CHESEBROUGH MANUFACTURING CO. (NEW YORK)

41 HOLBORN VIADUCT, LONDON, E.C.

SOLE MANUFACTURERS AND PROPRIETORS OF THE "VASELINE" PREPARATIONS

# FLETCHERS' Concentrated Liquors.

Universally acknowledged by Pharmacists who have them in use to be the most Simple, Efficient, and Economical of all methods for preparing Syrups.

# Ferri Iodidi.

 $E^{ extit{ACH}}$  fluid drachm contains 34.4 grains of Iodide of Iron.

O<sup>NE</sup> volume added to seven volumes of Syrupus, B.P., forms Syr. Ferri Iodidi of full Pharmacopoeia strength.

# Liquor Ferri et Quiniæ et Strychniæ Phosph.

EACH fluid drachm contains 4 grains of Phosphate of Iron, 4 grains of Phosphate of Quinia, and a grain of Strychnia.

ONE volume added to three volumes of Syrupus, B.P., forms Easton's Syrup.

# EIQUOR Calcis Lactophosph.

EACH fluid drachm contains 8 grains of anhydrous Calcium Phosphate combined with Lactic Acid.

ONE volume added to seven volumes of Syrupus, B.P., forms Syr. Calcis Lactophosph.

# LIQUOR Herri Phosph.

E<sup>ACH</sup> fluid drachm contains 8 grains of Ferrous Phosphate.

ONE volume added to seven volumes of Syrupus, B.P., forms Syr. Ferri Phosph.

# Ferri Phosph. Comp.

EACH fluid drachm contains, in addition to the alkaline Phosphates, 4 grains of Phosphate of Iron, and 8 grains of Phosphate of Calcium, dissolved in pure Phosphoric Acid.

O<sup>NE</sup> volume added to three volumes or Syrupus, B.P., forms "Chemical Food."

# EIQUOR Ferri Hypophosph.

EACH fluid drachm contains 8 grains of Hypophosphite of Iron.

ONE volume added to seven volumes of Syrupus, B.P., forms Syr. Ferri Hypophosph.

On receipt of a Post Card, trial samples will be sent, carriage paid, to any address.

Detailed List, containing prices and particulars of upwards of thirty different combinations, post free on application.

FLETCHER, FLETCHER & STEVENSON, Holloway, London, N.

# THE EDINBURGH COFFEE ESSENCES.

INVIGORATING, DELICIOUS, ECONOMICAL AND CONVENIENT.

# SYMINGTON'S PURE COFFEE ESSENCE.



This Essence is guaranteed to contain all the soluble constituents of COFFEE (the only addition being Pure Sugar), the GRATEFUL AROMA of the freshly roasted Beans being retained by their Special Process of manufacture.

The New 1s. Bottle makes 30 Cups of Coffee, equal to that made—in the most approved manner-direct from the finest Beans.

SYMINGTON'S PURE COFFEE ESSENCE is an almost certain cure for Nervous Headaches, etc.

A Sample Bottle will be forwarded free by Post to any Chemist on receipt of Card.

# **CON'S DANDELION COFFEE ESSENCE**

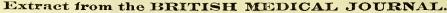
Is Specially adapted for the Dyspeptic and Bilious who cannot take ordinary Coffee.

This Beverage combines the Medicinal virtues of Taraxacum with the refreshing properties of Coffee.

The Shilling Bottle makes 25 Cups of Coffee.

Extract from the LANCET.

"The Essence of Dandelion Coffee is really an excellent substitute for coffee, and will, we think, be an advantage to many bilious and dyspeptic patients.



"Symington & Co.'s Coffee Essences have a standard reputation, and possess great merit. The Coffee Essence must be prepared in vacuo at a low temperature, as the aroma of the Coffee is well preserved; in its essential qualities it does not differ in any way from a cup of Coffee made in the ordinary way."





CHEMIST

Forty large Cups of delicious Coffee made without trouble, for One Shilling, by using

SYMINGTON'S

Prepared from the finest Coffee, with a suitable proportion of Chicory, which is generally preferred.

The great and increasing demand for this article warrants the assertion that it is the

COFFEE MILLION. FOR

THE CHEMIST AND DRUGGIST.
SUPPLEMENT

# **SQUIRE'S**

PATENTED
MALTED & COOKED
FARINACEOUS

# FOOD FOR INFANTS.

PRIZE MEDAL-INTERNATIONAL HEALTH EXHIBITION.

This will be found one of the most nutritious and easily digested Foods for Infants. It is prepared from the best wheaten flour, treated with malt in solution, whereby the food becomes very largely self-digestive. This process includes all the soluble and digestive properties of the malt, and avoids the introduction of the husk, which is directed by Professor Liebig to be strained out when foods are made with ground malt.

# SQUIRE'S CHEMICAL FOOD.

It is a complex solution of Iron, Lime, Soda, and Potash, in a Phosphoric Syrup. The Iron is in the Ferrous condition.

This Preparation, formerly known as PARRISH'S CHEMICAL FOOD, has been purchased by Messrs. Squire. Each bottle of the genuine Preparation is secured by their seal, and the cases bear their Registered Trade Mark.

# SQUIRE'S SUPER- MALT EXTRACT.

EXTRACT BYNES (SQUIRE).

This Extract is prepared from the finest Malted Barley, at a very low temperature, in vacuo, by a special process, under the immediate supervision of one of the Firm. It possesses the highest digestive power of any Extract of Malt in the Market. A copy of the comparative examinations of the various kinds reported in the Medical Times, June 21, 1884, pages 847 and 848, will be forwarded to any Physician on application. It contains only the soluble constituents of good Malt.

FWO PRIZE MEDALS—National Health Society's Exhibition, 1883; International Health Exhibition, 1884.

SQUIRE,

Chemist on the Establishment in Ordinary to the Queen,

413 OXFORD STREET, LONDON.

# NITRO-GLYCERINE TABLETS.

1-100th of a grain in each.

For ANGINA PECTORIS, NEURALGIA, HEADACHE, BRIGHT'S DISEASE, ASTHMA, etc.

The relief afforded by Nitro-Glycerine in Angina Pectoris is one of the most mportant discoveries of modern Therapeutics. A dose quickly checks the agonizing pain, and taken at intervals it wards off the attacks without producing any njurious effects on the Patient.

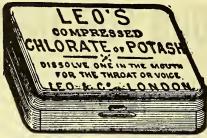
The Nitro-Glycerine is combined with Chocolate in a perfectly safe and stable form, and will keep in any climate. Price, 4s. 6d. and 2s. 6d. per Box.

Also for Hospitals and Dispensaries in 4-oz. and 2-oz. Bottles, 22s. and 12s. 6d each respectively. or export to very hot climates smaller bottles may likewise be had at 4s. 9d. and 2s. 9d. per bottle.

# W. MARTINDALE,

PHARMACEUTICAL CHEMIST,

10 New Cavendish Street, LONDON, W.



# LEO'S

COMPRESSED

Chlorate of Potash.

Price to the Trade, 2/6 PER DOZEN, less

the usual discount. Supplied by all Wholesale Druggists. A sample dozen boxes will be sent, postage paid, to any Chemist, on receipt of 2/6 in stamps.

These are the best, and are put up in the most elegant style of any cheap compressed goods in the market.

SOLE WHOLESALE AGENTS:

BARCLAY & SONS, 95, Farringdon Street, London, E.G.

# W. EDWARDS & SON,

157 QUEEN VICTORIA STREET, LONDON,

WHOLESALE AND EXPORT DEALERS IN

# Patent Medicines and Proprietary Articles,

ENGLISH, AMERICAN, FRENCH, &c.

### SOLE AGENTS for ROCHE'S HERBAL EMBROCATION,

Burchell's Anodyne Necklaces, Ford's Balsam of Horehound, Widow Welch's Pills, by Mrs. Smithers, Oxley's Essence Ginger, and the preparations of Messrs. Hudson & Son, late of the Haymarket, London.

PRICE LISTS SENT ON APPLICATION. ORDERS CAREFULLY AND PROMPTLY EXECUTED.

# ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.

Specially prepared for Quinine Wine, does not deposit, will keep good in any Climate, and well adapted for Export Trade.

Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

### THE UNIVERSAL CORN AND WART PENCIL

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapte for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.
N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the Britis Pharmacopesia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopecta.

Per lb. Aqua Anethi, Concent. 4/0
, Anisi, 4/0
, Gamphore 4/0
, Carui , 4/0
, Flor. Sambuci , 8/6
, 7, 7 Virid. , 4/0
, Flor. Sambuci , 8/6
, 7, 7 Virid. , 4/0
, Flor. Sambuci , 8/6
, 7, 7 Virid. , 4/0

The above are put up in Bottles of hib. or lib. and upwards, each of which has the Inventor's Protection Label over cor Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & O. Wholesale Agents—Hearon & Co., Bewley & Drasper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & O. Glasgow; Raimes & Co., Duncan Flockhart & Co., J. Mackay & Co., T. & H. Smith & Co., Edinburgh; Foggitt, Thirsk; Goodall & Co., Leed J. Richardson & Co., Leicester; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Mancheste

# BARCLAY & SONS,



95 FARRINGDON STREET, LONDON.

NET CATALOGUE OF BRITISH & FOREIGN GENUINE

# PROPRIETARY MEDICINES

PERFUMERY, MINERAL WATERS, LOZENGES, AND DRUGGISTS' SUNDRIES.

FORWARDED POST FREE ON APPLICATION TO ANY PART OF THE WORLD.

SOLE PROPRIETORS OF

ANTAKOS, DREDGE'S HEAL ALL,

DAVY'S DIAMOND CEMENT,

MRS. JOHNSON'S AMERICAN SOOTHING SYRUP,

LEEMING'S ESSENCE (Genuine), &c., &c.

Handbills with Name and Address supplied free.

6D. TELEGRAMS 6D.

# BARCLAY & SONS

beg to call special attention to their Registered Telegraphic Address-

"YALCRAB LONDON."

BARCLAY & SONS, 95 FARRINGDON STREET, LONDON.

# CONDY'S FLUID—IMITATIONS.

In the Sigh Court of Instice (Chancery Division).

CONDY & MITCHELL (Limited), Plaintiffs, 67 Turnmill Street, London, E.C.

ROBERT SUMNER & CO., Defendants, WHOLESALE DRUGGISTS, 40a Lord Street, Liverpool.

We, the undersigned Defendants in this case, having IN IGNORANCE of THE LEGAL RIGHTS of the Plaintiffs, sold disinfeeting fluid under the name of "CONDY'S FLUID," such compound NOT being of the Plaintiffs' manufacture, hereby express our regret, and have consented to a PERPETUAL INJUNCTION WITH COSTS in this action.

Dated 17th day of October, 1884.

(Signed) R. SUMNER & CO.

(Witness) J. W. THOMPSON, Solicitor, Liverpool.

VIDE ALSO

CONDY & MITCHELL (Ltd.) V. FLINDERS. CONDY & MITCHELL (Ltd.) V. COLDWELL.

In which Perpetual Injunctions with costs were granted.

My clients, Messrs. CONDY & MITCHELLL, Limited, SOLE Proprietors and Manufacturers of CONDY'S FLUID, Condy's Ozonized Water, &c., have instructed me to take proceedings against any parties in ANY WAY infringing their well-known and DULY REGISTERED TRADE MARKS OR LABELS. J. SEYMOUR SALAMAN.

Solicitor, Trade Mark Protection Society

3 KING STREET, E.C.

# ENO'S FRUIT SALT

In Equity

# AT THE ANTIPODES.

# SYDNEY, NEW SOUTH WALES,

JULY 2, 1885.

In Equity.—(Before his Honour the PRIMARY JUDGE.)
ENO v. HOGG.

Another case of commercial piracy was disposed of by Sir William Manning on Tuesday last. Mr. S. P. Hogg, having been proved guilty of infringing the trade-mark of Mr. J. C. Eno, of Fruit Salt renown, was assessed in damages to the tune of £100. This is the third case of the kind that has been before the Court during the past few months. Eno was the plaintiff, and Davies & Co., of Goulburn, were the defendants. The charge was that the defendants had infringed the trade-mark of the plaintiff in respect of his preparation known as Fruit Salt. The evidence disclosed the fact that the plaintiff's bottles and labels had been closely imitated by the defendants, and the Judge declared this imitation was the result of a deliberate inten-The defence was a practical tion to defraud. admission of fraud, and the fact that it was set up is itself a sufficient justification for the sentence of the Judge. The defendant pleaded that the term "Fruit Salt" was applied to several other manufactures besides the one for which he was responsible, and that his commodity was so dissimilar to that of the plaintiff that there could have been no deception. Paraphrased, the former part of the plea says:—Other people do what I am accused of having done, therefore I ought not to be punished. Fortunately that kind of reasoning has no weight in the Supreme Court. The latter part of the plea was contradicted by the production of packages of the defendant's commodity. These did not exactly resemble the plaintiff's preparations, but there were many points of similarity between the two. As the Judge remarked, "the imitation was not so palpable as in some other cases, yet it had gone as far as the imitator dared." The suspicion is created that when the defendant included the words "Fruit Salt" in the name of the commodity which he manufactured for sale, his intention was to deceive. Frauds of the kind referred to are common, and the public of course suffer greatly thereby. The expressed determination of Sir William Manning to severely punish every person who may be proved guilty before him of having committed such offences will, however, have the effect of causing manufacturers whose trade-marks are being infringed to prosecute the pirates, and thus the evil, we may hope, will be made to cease.—Sydney Morning Herald, July 2.

OUCCESS IN LIFE — "A new invention is brought before the public and commands success. A score of abominable imitations are immediately introduced by the unscrupulous, who, in copying the original closely enough to deceive the public, and yet not so exactly as to infringe upon legal rights, exercise an ingenuity that, employed in an original channel, could not fail to secure reputation and profit."—Adams.

CAUTION—Legal Rights are protected in every Civilised Country.

DIRECTIONS IN SIXTEEN LANGUAGES HOW TO PREVENT DISEASE.

PREPARED ONLY AT

ENO'S FRUIT SALT WORKS, HATCHAM, LONDON, S.E.

BY J. C. ENO'S PATENT.

# IT WILL PAY YOU

to take this Agency, because you can sell ten time more CELANDINE than any other "CORN CURE," without trouble or expense.

See opinions of 500 Chemists who have proved it

CELANDINE is the best and most saleable article in the Market.

WRITE FOR
PARTICULARS,
LIBERAL TERMS,
AND AGENCY.

Trade Mark, 31648.

CELANDINA

\*\*CURES CORNS \*\*

PAINLESS & EFFECTUAL

GEMISTS CHAVE & JACKSON, HEREFORD.

WRITE FOR
PARTICULARS,
LIBERAL TERMS,
AND AGENCY.

Retail at 1/ and 2/6.

CELANDINE is attractively Wrapped in Colours. Well Advertised. Known all over the World. In greater demand than any other remedy for Corns. Acknowledges no equal or imitation. Gains recommendation of all buyers.

Great advantages offered to pushing Agents, whose interests are protected. A large and profitable trade can be done without risk, competition, or outlay. Satisfaction guaranteed.

ATTEACTIVE HANDBILLS, PAMPHLETS, &C., WITH AGENT'S NAME, SHOW CARDS, POSTERS, TESTIMONIALS, &C., ON APPLICATION.

### AN ARTISTIC SHOW CARD IN EIGHT COLOURS.

Mr. DAVID GILMOUR, Chemist, Dunfermline, writes:—"It is just a year since I sent the first order for a modest 3 dozen Celandine. Have now sold over 900 bottles, and gained the recommendation of many customers. Its imitations are one by one falling away."

INFRINGEMENTS will be prosecuted. We have obtained Injunctions. Costs, and Apology against the proprietors of spurious imitations called CELANITE and CELESTINE (see decision of Mr. Justice Kay, Chancery Division, High Court of Justice).

ENGLISH AND FOREIGN AGENTS WANTED. CORRESPONDENCE SOLICITED.

CHAVE & JACKSON, HEREFORD. "CELANDINE," HEREFORD.

# RESPIRATORS!!

	0		,
CLOUD, per doz	Õ	s. 8	d. 0
COLLIER'S, per doz., No. 0, 18/-; No. 1, 24/-; No. 2, 30/-; No. 3, 42/-;			
No. 4, 48/-; No. 5, 36/-; No. 6	2	14	0
CORK, per doz	0	6	0
COTTON WOOL, per doz Oral, 48/-; Orinasal	3	0	0
MAW'S ÆTHEREON, per doz Silver-plated, 40/-; Gilt	3	4	0
MAW'S MICRO-ÆTHEREON, per doz Silver-plated, 40/-; Gilt	3	4	0
MAW'S INCORRODIBLE METALLIC, per doz., No. 1, 8/-; 1A, 12/-;			
2, 21/-; 2A, 18/-; 3, 30/-; 3A, 24/-; 4, 32/-; 5, 40/-; 6, 45/-; 7, 50/-;			
8, <b>56</b> /-; Dwarf, No. 1, <b>24</b> /-; 2, <b>30</b> /-; 3,	2	0	0
MAW'S SCARF, each Silver-plated, 5/6; Gilt	0	8	0
NIGHTINGALE'S INVISIBLE, each No. 1, 3/8; No. 2, 7/-; No. 3,	0	14	0
ROOFF'S, per doz 19/-, 27/-, 39/-, 48/-, and	3	3	0
ROOFF'S ORINASAL CHARCOAL, for preventing the Inhalation of			
ROOFF'S ORINASAL CHARCOAL, for preventing the Inhalation of Deleterious Vapours and Poisonous Powders in Chemical and Manufacturing		_	0
Establishments each	0	5	6

# S. MAW, SON & THOMPSON,

# NOTICE AND CAUTION!

In the Bigh Court of Justice, before Mr. Justice Chitty.

# IMITATIONS OF PEARS' SOAP.

THE TRADE MARK PROTECTION

SOCIETY hereby give notice that they have received instructions from Messys. PEARS to prosecute all persons manufacturing, selling, or offering for sale colourable imitations of their goods.

Four Actions have been commenced, and

# FOUR PERPETUAL INJUNCTIONS WITH ALL COSTS,

Obtained against dealers in the City of London, at Chelsea, Birmingham, and Croydon.

INFORMATION in respect of any Imitation being offered will be much esteemed and treated as confidential, and may be sent to the Trade Mark Protection Society, or to Messys. PEARS direct.

The Trade Mark Protection Society,

KING STREET,

CHEAPSIDE, E.C.



# THE CROWN PERFUMERY CO.,

B B

177 New Bond St., London,

Beg to draw the attention of Chemists, Druggists, and Perfumery Dealers to their Fine Perfumes and Fancy Soaps, for the excellent quality of which

# SEVEN PRIZE MEDALS HAVE BEEN AWARDED

Concentrated Essences of Great Fragrance and Strength:-

Tanglewood, Crown Bouquet, Mathiola, Stephanotis,

White Rose, Jockey Club, Ess Bouquet, Wood Violet, Frangipani,
Opoponax,
Ylang Ylang,
Isle of Wight Bouquet,

16/, 20/, 28/, 48/, and 84/ per doz.

SUPPLIED IN BOND FOR EXPORT AT GREATLY REDUCED PRICES.

THE CROWN SOAPS are prepared with great care from the purest materials, delicately perfumed, and very lasting.

BROWN WINDSOR, HONEY, ALMOND AND GLYCERINE, ROSE, &c.—In Card Boxes of 3 tablets each, 8/ and 12/ per dozen boxes; also in Wood Boxes of 7 or 14 lbs., 64/, 74/, 84/, and 120/ per cwt.

BEST OLD ENGLISH TRANSPARENT SOAP (unscented), 36/- per gross.

" (scented), 72/- per gross.

PURE COAL TAR SOAP.—Each tablet enveloped in tin-foil. 27s. per gross. The well-known disinfecting properties of this Soap have caused it to be in universal demand.

OPALINE SOAP, FOR THE SKIN AND COMPLEXION.—Absolutely pure, delicately scented, and very emollient. 12/ per dozen boxes.

OPALINE TOOTH PASTE, the New Fragrant Dentifrice, 8/ per doz.

OPALINE FACE POWDER, 3/6 and 7/ per dozen packets; 15/ per dozen boxes.

Indents may be forwarded through any English Commission Merchant or Drug House.

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE MANUFACTORY,

NEW FAIRFIELD WORKS, OLD BAILEY, E.C.

### FRICTION.

THE MOST PLEASANT MODE OF APPLYING IT TO THE SKIN IS BY THE

# PANSTREPTON (or All-Pliant) FLESH BRUSH.

The best Article ever introduced for the purpose.

PRICES FROM 22/ to 36/ per doz.

Of all WHOLESALE HOUSES or of the SOLE MANUFACTURER,

R. CONDRON, 2 BINGFIELD STREET, LONDON, N.

EIGHT PRIZE MEDALS.

# GUSTAV BOEHIVI'S

TRANSPARENT GLYCERINE SOAP, Manufactured with Pure Spirits of Wine and Purest Glycerine. The first Soap of this description introduced in this market, and still recognised the best. Prices have been reduced lately.

PURIFIED TOILET SOAPS, Highly Scented. Large variety of such delicate Scents as Ess. Bouquet, Jockey Club, Musk, Oppoponax, Rose de Mai, New Mown Hay, Violet, Lavender, Tea Rose, Mignonette, and many other distinct Perfumes.

CALCUTTA GOLD MEDAL EXHIBITION SOAP, assorted in 12 different scents

WINDSOR, HONEY, OATMEAL, COAL TAR, CARBOLIC, and all kinds of

EXTRACTS OF FLOWERS, Triple, Double, and Simple.

FLORAL PERFUMES, with appropriate Silk Flower Labels—very attractive.

LAVENDER WATER, FLORIDA WATER, EAU DE COLOGNE, and all other

DENTIFRICE. VIOLET POWDER, and all other Requisites for the Toilet.

PETROSINE POMADE and PETROSINE IN BULK—a Petroleum Jelly, guaranteed never to turn rancid.

MANUFACTORIES { 38 CHARLES STREET, CITY ROAD, LONDON, E.C., and at OFFENBACH o/MAIN, GERMANY.

# ROWLAND'S TOILET ARTICLES.



20 Hatton Garden, London,

Have been known for the last 84 years all over the world, and being well advertised, and always finding a ready sale, are well worthy the attention of Chemists. Drng-gists, and Storekeepers. They will keep good for years, no matter how hot or cold the climate may be.

# ROWLANI

Preserves, strengthens, and beautifies the hair; it contains no lead or mineral ingredients, and can now be also had in a golden colour, which is especially suited for fair or golden-haired children and persons. golden-haired children and persons. Four sizes.

Le a most cooling, healing, and refreshing wash for the face, hands and arms, and is perfectly free from any mineral or metallic admixtures; it disperses freckles, tan, prickly-heat, redness, pimples, &c.

Or PEARL DENTIFRICE, whitens the Teeth, prevents and arrests Decay, strengthens the gums, and gives a pleasing fragrance to the breath.

Lea beautifully pure, delicate, and fragrant toilet powder, and has lately been much improved. Each box has inside the lid a crtificate of purity from Dr. Redwood, Ph.D.; F.C.S., &c. Sold in three tints—white, rose, and cream.

Produces immediately a perfect change in red or grey air, whiskers and eyebrows, to a glossy and permanent brown or black, which colour neither washing nor perspiration will remove.

IMPORTANT CAUTION.—To protect the public from fraud, ALL ROWLAND'S ARTICLES have on the WRAPPER their SIGNATURE,
"A. ROWLAND & SONS," in red ink.

COUNTER BILLS, SHOW CARDS, &c., CAN ALWAYS BE HAD ON APPLICATION.

WINTER SEASON, 1885-6.

# KAY'S FAMILY REFERENCE ALMANACK, 1886.

KAI S FABILLI KELEKLINUL ALMANAUN, 100U. Chems, &c., on the cover, free of charge, on writing to Messrs. KAY BROTHERS, and undertaking their distribution from house to house as soon as received. Also 1,000 bills for counter use, with name and address, if asked for. Enclose two (2) labels for correct address, with population of the district and best means of conveyance, under cover (labels on post cards bring contrary to regulations) addressed "Advertisement Department," at your earliest convenience. The Almanacks will be sent direct from the printer, with counter bills, showcards, &c., if required.

# Kay's New Transparent Cement for Broken Articles. "Clear as Crystal," "Stronger than Glass," "Tough as Leather," 6d., 1s., 2s., in Boxes or on Cards. Showcards, Handbills, with name, &c. Specimens, &c., for home or export, free.

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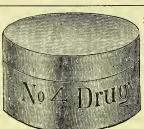
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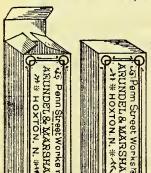
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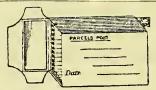
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FIG. 3. Double, for the Chest and Back.

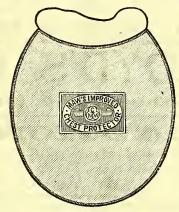


FIG. 4. Single, Chest Protector.



Vest, a Shield for the Lungs.

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4					No. 1	No. 2	No. 3	No. 4
ig.	3.	Double	•••	per doz.	20/	26/	<b>32</b> /	39/
-		Ditto, perforated	•••	"	24/	32/	38/	46/
ig.	4.	Single	•••	"	9/	11/6	13/6	16/
17		Ditto, perforated	•••	"	11/	14/	16/	19/
ig.	5.	Vests : ,,	•••	3,7	27/	34/	42/	51/
1.00								-

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				No. 1	No. 2	No. 3	No. 4	No. 5
'ig. 3.	Double, best	•••	per doz.	17/	22/	27/	33/	44/
1	Ditto, second	•••	"	14/6	<b>1</b> 9/	23/	<b>2</b> 8/	37/
'ig. 4.	Single, best	•••	- 11	7/6	9/6	11/	14/	20/
ITI	Ditto, second	•••	"	6/6	8/	9/6	12/	16/
'ig. 5.	Vests, Scarlet	•••	91	17/	22/	<b>27</b> /	33/	40/

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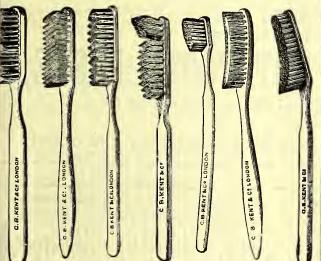
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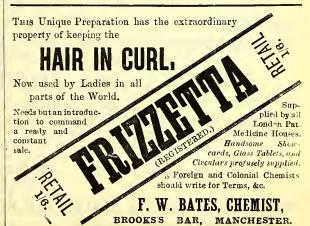
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# TONIES

Regent Wharf, Copperfield Road, Mile End, London, E.

FROM RATCLIFF.

SAMPLES AND PRICES UPON APPLICATION.

80

### CRAWSHAW'S SPECIALITIES.

6d. DYES(14 to the Doz.) In ½-gross Counter Cases 48/- Gross.	3d. PERFECT BLACK DYE In 4 Gross Wood Boxes 21/- Gross.
6d. DYES(14 to the Doz.)in 1 Dozen Boxes48/- Gross.	
3d. DYESOn ½ Gross Cards	1s. SILVER PLATING SOLUTION0n ½ Dozen Cards
3d. DYESIn ½ Gross Boxes	6d. TINS CRAWSHAW'S INSECT POWDERIn 3 Dozen Wood Boxes 48/- Gross
3d. DYESOn ½ Gross Cards14/- Gross.	3d BOXES CRAWSHAW'S INSECT
2d. DYESIn ½ Gross Boxes	POWDER. In ½ Gross Wood Boxes 21/- Gross.
1d. DYESIn 3 Gross Counter Case, with glass lid7/- Gross.	1d. BOXES CRAWSHAW'S INSECT POWDERIn 1 Gross Wood Boxes 7/- Gross.
1d. DYESOn ½ Gross Cards7/- Gross.	
ld. DYESIn ) Gross Boxes	1d. BOXES CRAWSHAW'S INSECT POWDER. Mounted on Cards of 4 Gross 7/- Gross.
6d. PERFECT BLACK DYE. In ‡ Gross Wood Boxes	3d. BOXES CRAWSHAW'S BEETLE POWDERIn ½ Gross Wood Boxes

CRAWSHAW FANN STREET, ALDERSGATE STREET, LONDON.

TALLOW, &c.

26 ALEXANDRA BUILDINGS,

Estabd.] Ormond IMPORTERS OF AND MERCH Hard and Soft Stearine Pitch Hot Neck Grease Cotton Seed and Patent Brown, Vegetable, & Wood ,, Stockholm and Archangel ,, Palm Oil Pitch

Turpentine & Rosin Soft Soap, Glues, &c Brimstone, Ashes, &c.

Street, Liverpool, ITS IN ALL KINDS OF PITCH, OILS, Roll and Flour Sulphur Tallow, Cylinder Oils, Royal Daylight Petroleum, &c.

SAMPLES AND LOWEST PRICES ON APPLICATION.

Is strongly recommended as a safe and effectual remedy in cases of Rheumatism, Gout, Rheumatic Gout, Sciatica, Lumbago, Headache, Pains in the Stomach, Spasms, Bruises, Chilblains, &c. Retail in Bottles, 1s. each.

 $\mathbf{b}\mathbf{y}$ H. & S. JOHNSON, Wholesale Druggists, 6, 8, & 10 WHITECHAPEL, AND 7 CHURCH STREET, LIVERPOOL.

hot

S,

Starching made easy and pleasant.

Prevents the iron sticking



Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes, for Hotels, Laundries, &c., 5s., 10s., and 20s. each.

Wholesale by Maw & Sons, Evans, Sons & Co., Southall Bros. & Barclay. Wyleys & Co., &c.

# HAND & STEAM POWER **PRESSES**

For making into Blocks, Tablets, or Pellets, Drugs, Blue, Blacklead, and other Powders.

# R. M. COLLINGHAM.

ENGINEER,

Green Lane Foundry, Hull.

Gold Medal, Adelaide, 1881. Order of Merit, Melbourne, 1880. Diploma of Merit, Vienna, 1873.

Established over Half a Century.

For Cleaning and Polishing Brass, Copper, Tin, Britannia Metal, &c., &c.



Pickering's Furniture Polish, Plate Powder, Knife Powder, Brunswick Black, Razor Paste, Harness Blacking, Polishing Pomade (red) for Metals, &c.

JOSEPH PICKERING & SONS, SHEFFIELD.

# MPROVED AND LATEST MACHINERY

**PARIS, 1878** 

FOR

VIENNA, 1873.



# DRUG GRINDERS,

WHOLESALE

# CHEMISTS & DRUGGISTS,



PAINT AND COLOUR MANUFACTURERS,

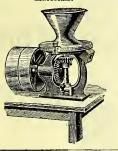
### HAND EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.



### NEW DRUG MILL.

For Ginger, Roots, and all kinds of friable materials.



### NEW HORIZONTAL MIXER,

For Amalgamating Compounds, &c. (made with or without casing).



# HAND MIXING AND CRUSHING PAN MILL.

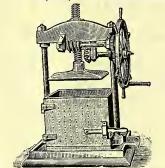
For Ointments, Pastes.



Powders, &c., &c.

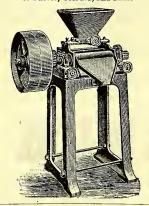
### COMPOUND PRESS.

For Tinctures, &c. (made in Wood and Iron).



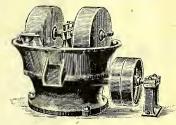
### **NEW GRINDING MILL**

For Pastes, Colours, and Inks.



# POWER EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.



### HORIZONTAL MILL.

For Dry Powders.



### IMPROVED PAINT MILL.

For Mixing and Grinding Colours in Water or



MACHINES FOR SPECIAL PURPOSES, EVAPORATING PANS, &c., MADE TO ORDER.

Prices and particulars on application to

FOLLOWS & BATE, LIMITED, Engineers,
DUTTON STREET WORKS, MANCHESTER.

1 lb. each net.

do.

do.

do.

2

 $3\frac{1}{2}$ 

# "IMPERIAL"

(REGISTERED BRAND)

# SOFT SOAP

IN TINS.



4 lb. each net.

6 do.

7 do.

And Firkins &

Half-Firkins.

May be had through all Wholesale Druggists, Oil Merchants, and Drysalters, and (in wholesale quantities only) of the Manufacturers,

# THE CHISWICK SOAP CO.,

CHISWICK, LONDON, W.

Makers of the "10% Carbolic," "P.B. Olive," "BBB," "BB," and other Soft Soaps.

GOLD MEDAL, CALCUTTA EXHIBITION.

Also PRIZE MEDAL at the INTERNATIONAL HEALTH EXHIBITION for SOFT SOAPS.

WHOLESALE PRICE.

DESCRIPTIVE CATALOGUE

### LATIMER BOURNE, **JOHNSON**

DESCRIPTION.

	*****				DESC	TILL LIOI	•						FALLE AND	T012 X-		T. 1.1.	C ASS		*******		, 1010 100
															s.	d.				£ s.	d.
	1.	The Shilling	Respi	rator									Oval, e	ach		0			per doz.		0
	2.	Metallic, Co												,,	2	0			٠,,	0 12	0
	3.			et Pads					••					,,	2	6	••		"	0.18	0
	3A.	Silver-plate	d Wire,	Silk Vely										11	2	6	••		,,	0 18	0
	4.	,,	,,	,,	,,									,,	3	0			,,	1 1	0
	5.	"	,,	"	11								C	11	4	0			,,	1 8	0
	5A.	11	,,	**	**	Witho	ut Er	nds					-	,,	3	6			"	1 4	0
	6.	11	21	Elastic Si		piece							,,	,,	4	0			,,		0
	7.	Gold-plated	,,	Silk Velv								• •	,,	,,	7	6	• •		,,	2 8	0
	8.	Threefold S	ilver-pl	lated, Velv	et Pads	and Silk	Mou	thpiece	,				,,	,,	6	0	• •		,,		0
	9.		old-pla		,.		,,					• •	,,	,,	7	6	• •		,,	2 8	0
	10.	The Aerial	Respira			Ladies*					• •	••	Oval	,,	5	0			,,		0
	11.	,,	,,		plated,	,,	• •	• •	• •		••		,,	,,	6	0	• •		٠,	2  2	0
	12.	,,	,,		-plated,	Gents'			• •			• •	"	19	6	0	• •		"	1 16	
	13.	**	>1		plated,	,,	• •		••	• •	• •	• •	,,	,,	7	6		• •	97	2 8	0
			(The.	Aerials ma	y be had	covered	with i	black or	· drab.	)					_	_					
	14.	Gold-plated			••	• •	• •	• •	• •		••	••	"	,,	7	6	• •	••	,,	2 8	0
	15.	Gold Plates			••			• •	• •		• •	• •	_ **	**	7	6	••	••	,,	2 8	0
	16.	Orinasal, Si				• •	• •	• •	• •	• •	• •	••	Fquare	,,	4	0	• •	• •	,,		0
	17.	Ladies' Min				••	• •	• •	•	• •	••	••	Oval	**	5	0	• •	• •	**		0
	18.	m, ", , , , , , ,		Gold-plate		••	• •		••.		··	••	,,	**	6	0	• •	• •	**	2 2	0
	19.	The Manife	old Res	spirator, o	f variabl	e powe	r, cor	ntainin	g six	Metai	lic Plat	es,								0.10	0
	00		hich a	re movable	e, Gold-p		••	••	••		••	• •	Square	"	10		••	••	,,	$\begin{array}{c} 3 & 12 \\ 3 & 12 \end{array}$	
	20.	Ditto	/ m	ditto	<b>n</b>	dit				tto				,,	10	6	••	• •	"	5 14	U
	01	C 4 -2 6 21 -	(The	Manifold 1	kespirato								.)		-	0				1 10	0
	21.	Gents' full					• •	• •	• • - 1	• •	• •	• •	31	,,	5	0	••	•••	"		0
	22.	m- 11 Class 22		old-plated	027		• •	••	••	• •	••	••	0=:-0==1	,,	6 5	0	••	••	,,		0
	23.	The Cottou	-wool	-				••	••	• •	••	••	Orinasal	"	8	6	••	• •	,,		0
	24.	**		,,	Gold-pl	atea	••	••	••	• •	••	••	0,,,	,,		0	• •	••	,,	1 16	
	25.	"		" ( 4	,,	3.3 1	n		3.77	••	••	••	Oval	**	5	U	• •	••	,,	1 10	U
Mos	1 0	and 9		•	ecommen						Non 7	0 0	10 19 1	1 and	15				Contain 3 M	[etallic	Plates
1408	4 5	e, and 3	17 10	01 00 02	04 0-1	Conta	$\frac{1}{2}$	Brecamic	Dlate		108. 1	o, a,	12, 13, 1				••	••	6	i Ci will Ci	
"	4, 0	, 6, 10, 11, 16	, 17, 18	, 21, 22, 23					Plate		" 19			~		• •	••	• •	,, 6	"	,,
					The	e follow	ing N	ew Patt	terns h	ave 1	recently	been	added to	Stock :							

No. 15A. A Cheap Gold-plated OVAL Respirator, to sell at 3s. 6d. PRICE 30s. PER DOZEN.

No. 25A. Silver-plated OVAL Cotton Wool, to sell at 4s.

PRICE 30s. PER DOZEN.

No. 27. The Innaler Respirator, all metal, nickel-plated, with hingel front and space to contain medicated wool for Inhalation.

Price 16L per degree. Price 16/- per dozen.

Each Respirator (from No. 4 upwards) is neatly put up in a Metal Box, and is priced so as to yield half profit.

A liberal supply of handbills and show-cards will accompany each parcel.

following assortment contains the leading The



### No. 1 Case.

Two each of Nos. 1, 2, 3, 4. 5, 8, 10, 12, 14, 15, 17, 18, 20, 21, 22. Producing retail Cost Less 10 per cent. Showing a PROFIT of



RETAIL PRICE.

### No. 2 Case.

Six each of Nos. 1, 2, 3, 4. Two ,, 5, 6, 8, 10, 12, 17, 18, 21, 22. One ,, 7, 9, 11, 13, 14, 15, 16, 20, 23, 25. Producing retail £1018 6 Less 10 per cent. 5 6 4 Showing a PROFIT of £5 12 2

With Orders amounting to £2 NET we will send a Mahogany Glass-top Counter Case, with Hinged Lid. FREE OF CHARGE; and with Orders amounting to £5 NET, a Handsome Mahogany Counter Case (size  $22 \times 12 \times 4$ ), with Sloping Top, Hinged Back, and Sliding Tray.

BOURNE, JOHNSON & LATIMER, RESPIRATOR MANUFACTURERS & DRUGGISTS'

34 & 35 CASTLE STREET, HOLBORN, E.C.

# J. SANGER & SONS' PRICE CURRENT,

WITH ADDENDA AND ALTERATIONS,

IS NOW READY,

AND WILL BE FOUND TO BE A MOST COMPREHENSIVE LIST OF

# PROPRIETARY MEDICINES, PERFUMERY,



# DRUGGISTS' SUNDRIES, LOZENGES,

MINERAL WATERS, ETC.

AND WILL COMPARE FAVOURABLY WITH ANY OTHER LIST AS TO

PRICES CHARGED.

POST FREE ON RECEIPT OF BUSINESS CARD.

Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other houses.

AGENCIES OF ALL KINDS UNDERTAKEN ON FAVOURABLE TERMS.

J. SANGER & SONS, 489 Oxford Street, LONDON, W.

THE SPECIAL ATTENTION OF THE TRADE IS CALLED TO

# BENZINE COLLAS,

Which is acknowledged on all hands to be the most reliable Preparation for removing Grease, Oil, Tar, Wax, or Paint from every description of Wearing Apparel or Household Stuffs. It neither injures the colour or texture, nor leaves any odour or stain. It is neatly got up, and is a most saleable article. Observe the word "COLLAS" on label and cap.

1,000 Handbills, with Name and Address,
Will be printed for any Chemist who gives an order for

:E1 WORTH of BENZINE COLLAS,

6d. Size ... 4s. per dozen, subject to Discount 1s. Size ... 8s. ... 9s. ... 9s. ... 9s. 1s. 6d. Size ... 13s. 6d. ... ... 9s. ... 9s.

Special Quotations to Shippers and Buyers of 6 dozen of any size and upwards.

J. SANGER & SONS, 489 OXFORD ST., LONDON, W.

# KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.

### CAUTION:

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for Widow Welch's Female Pills has been prepared by them for 97 Years! Chemists are particularly requested to remark that, as a testimony of anthenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

1,000 Handbills, with Name, and 2 Tin Showcards,

Supplied with all Orders for One Dozen (13) Boxes.

PRICE 27s. PER DOZEN, subject to usual Discount. Special Quotations to Shippers and for large quantities

J. SANGER & SONS,

489 OXFORD ST., LONDON, W.

# MONTHLY PRICE CURRENT

# DRUCS, CHEMICALS,

PHARMACEUTICAL PREPARATIONS.

SUBJECT TO THE FLUCTUATIONS OF THE MARKET.

THE PRICES QUOTED ARE FOR QUANTITIES NOT LESS THAN SPECIFIED.

# THOMPSON, MILLARD & CO., LIM.

WHOLESALE DRUGGISTS, DRUGGISTS' SUNDRIESMEN, ETC., CURTAIN ROAD, LONDON, E.C.

Telegraphic Address—"BEATROP LONDON."

### SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

November 1885.

THOMPSON, MILLARD & CO., LIM., LONDON.
Monthly Price Current of Drugs, Chemicals, & Pharmaceutical Preparations. TIONS OF THE MARKET.

Agua Sambuci, Dest. lb 4d	
Cone 11d	
" Tampa Compai 6d	ı
Toward Ont 6/	۱
" - 2//	
" Mallie 3/	ı
	ı
,,	
Argent. Cyanid oz 6/6 ,, et Potassii Nitras	
,, et Potassii Nitras oz 2/3	
" Iodid " 6/	
" Nitras, Pur. " 3/7	
,, Cryst. ,, 3/6	
", ", Recryst. ", 3/8	
" Oxid " 6/6	
" Vivum lb 2/	
per bott 6l. 5/ cash	l
Arrowroot, Bermuda lb 2/	
<b>A</b> 0/0	
" " " <u>(T</u> ) " 2/8	
" Natal " 10d	
St Wincont 7d	
,, St. vincent. ,, 7d, 9d, 11d	
Arsenic, Alb. Plv.	
,, (1 cwt ck), ,, 16/	
,, Iodidoz 1/9	
Asbestos lb 2/6	
Atropia grain $1\frac{1}{2}d$	
,, oz 28/ Auri. Chlorid., 15 gr. tubes	
Auri. Chlorid., 15 gr. tubes	
doz 23/	
· ·	۱
Bacc. Capsici. Parv lb 8d	
" Pulv ,, 10d	
" Junipercwt 21/	
" Lauri " 34/	
,, ,, Pulv lb 10d	
Dimento 7.1	
D-1- 03	
,, ,, Pulv. ,, 8d	
Bals, Canada 8d	
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11	
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv 7/8	1
", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv ", 7/8 ", Sulphur ", 9d	1
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib 1/11 ", Peruv ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2	1
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2 Barytæ Carb. Pulv. ", 6d	
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv. ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2 Barytæ Carb. Pulv. ", 6d ", Nitras ", 6d	1
", ", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv. ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2 Barytæ Carb. Pulv. ", 6d ", Nitras ", 6d ", Pur. ", 1/2	
", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib ", 1/11 ", Peruv ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2 Barytæ Carb. Pulv. ", 6d ", Nitras ", 6d ", Pur ", 1/2 Beberiæ Sulph oz 4/	
", Pulv. ", 8d Bals. Canada ", 2/ ", Copaib 1/11 ", Peruv ", 7/8 ", Sulphur ", 9d ", Tolut ", 2/2 Barytæ Carb. Pulv. ", 6d ", Nitras ", 6d ", Pur ", 1/2 Beberiæ Sulph oz 4/ Birdlime, Japan lb 1/2	
## Pulv. ## 8d  Bals. Canada ## 2/  , Copaib ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur. ## 1/2  Beberiæ Sulph. oz ## 4/  Birdlime, Japan   b   1/2  Bismuthi Citras ## oz 1/	
Bals. Canada, 2/ ,, Copaib, 1/11 , Peruv, 7/8 ,, Sulphur, 9d ,, Tolut, 2/2 Barytæ Carb. Pulv ., 6d ,, Nitras, 6d ,, Pur, 1/2 Beberiæ Sulph 0z 4/ Birdlime, Japan lb 1/2 Bismuthi Citras 0z 1/ ,, et Amm. Citras 1/2	
## Pulv. ## 8d  Bals. Canada ## 2/2  , Copaib ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur ## 1/2  Beberiæ Sulph. ## 0z ## 4/  Birdlime, Japan ## 1/2  Bismuthi Citras ## 0z ## 1/2  ## et Amm. Citras ## 1/2  , Oxid. P.B. ## 1/6	
## Pulv. ## 8d  Bals. Canada ## 2/  , Copaib. ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Nitras ## 6d  , Pur. ## 1/2  Beberiæ Sulph. ## 0z ## 4/  Birdlime, Japan ## 1/2  Bismuthi Citras ## 0z ## 1/2  , et Amm. Citras ## 1/2  , Oxid. P.B. ## 11/6  , Subcarb. ## 8/10	
## Pulv. ## 8d  Bals. Canada ## 2/2  , Copaib ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur ## 1/2  Beberiæ Sulph. ## 0z ## 4/  Birdlime, Japan ## 1/2  Bismuthi Citras ## 0z ## 1/2  ## et Amm. Citras ## 1/2  , Oxid. P.B. ## 1/6	
## Pulv. ## 8d  Bals. Canada ## 2/  , Copaib   1/11  , Peruv ## 7/8  , Sulphur ## 9d  , Tolut ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur ## 1/2  Beberåæ Sulph. oz ## 4/  Birdlime, Japan   b 1/2  Bismuthi Citras oz 1/  , oxid. P.B. ## 11/6  , Subcarb. ## 8/10  , Trisnit ## 8/6  Bole Armen cwt 16/	
## Pulv. ## 8d  Bals. Canada ## 2/  ## Copaib. ## 1/11  ## Peruv. ## 7/8  ## Sulphur ## 9d  ## Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  ## Nitras ## 6d  ## Nitras ## 6d  ## Pur. ## 1/2  Beberiæ Sulph. oz ## 4/  Birdlime, Japan   b   1/2  Bismuthi Citras   oz   1/2  ## et Amm. Citras ## 1/6  ## Oxid. P.B. ## 11/6  ## Subcarb. ## 8/10  ## Trisnit. ## 8/6	
## Pulv. ## 8d  Bals. Canada	
## Pulv. ## 8d  Bals. Canada ## 2/2  , Copaib. ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur. ## 1/2  Beberiæ Sulph. ** oz ## 4/8  Birdlime, Japan ** lb ** 1/2  Bismuthi Citras ** oz ** 1/8  , oxid. P.B. ## 11/6  , Subcarb. ## 8/10  , Trisnit. ## 8/6  Bole Armen. ** cvt ** 16/8  Borax ** 42/9  , Pulv. ## 4/6/	
## Pulv. ## 8d  Bals. Canada ## 2/2  , Copaib. ## 1/11  , Peruv. ## 7/8  , Sulphur ## 9d  , Tolut. ## 2/2  Barytæ Carb. Pulv. ## 6d  , Nitras ## 6d  , Pur. ## 1/2  Beberiæ Sulph. ** oz ## 4/8  Birdlime, Japan ** lb ** 1/2  Bismuthi Citras ** oz ** 1/8  , oxid. P.B. ## 11/6  , Subcarb. ## 8/10  , Trisnit. ## 8/6  Bole Armen. ** cvt ** 16/8  Borax ** 42/9  , Pulv. ## 4/6/	
## Pulv. ## 8d  Bals. Canada	
## Pulv. ## 8d  Bals. Canada	
## Pulv. ## 8d  Bals. Canada	
## Pulv. ## 8d  Bals. Canada	
## Pulv. ## 8d  Bals. Canada	
## Bals. Canada ## 2/  ## Copaib. ## 1/11  ## Peruv. ## 7/8  ## Sulphur ## 9d  ## Tolut. ## 2/2  ## Barytæ Carb. Pulv. ## 6d  ## Nitras ## 6d  ## Nitras ## 6d  ## Nitras ## 6d  ## Pur. ## 1/2  ## Beberiæ Sulph. oz ## 4/6  ## Birdlime, Japan   b   1/2  ## Birdlime, Japan   b   1/2  ## Birdlime, Japan   b   1/2  ## Bismuthi Citras   0z   1/2  ## et Amm. Citras   1/2  ## Oxid. P.B.   11/6  ## Subcarb. ## 8/10  ## Trisnit. ## 8/6  ## Bole Armen. cwt   16/2  ## Bole Armen. cwt   16/2  ## Bole Armen. cwt   16/2  ## Bromine   oz   8d  ## Cadmii Bromid.   oz   9d  ## Cadmii Bromid.   0z   9d  ## Cadmii Bromid.   0z   9d  ## Cadmii Bromid.   0z   9d  ## Caffeina   0z   4/6  ## Calcii Chlorid.   1b   1/6  ## Caffeina   0z   0z   0z   0z   0z   0z   0z   0	
## Bals. Canada ## 2/2  ## 2/2	
## Bals. Canada ## 2/  ## Copaib. ## 1/11  ## Peruv. ## 9d  ## Tolut. ## 9	
## Pulv. ## 8d  Bals. Canada	
## Bals. Canada ## Pulv. ## 8d Bals. Canada ## 2/2,  ## 7/8  #	
## Bals. Canada ## 2/2	
Bals. Canada , 2/2, , Copaib , 1/11 ", Peruv , 7/8 ", Sulphur , 9d ", Tolut , 2/2 Barytæ Carb. Pulv. , 6d ", Nitras , 6d ", Pur , 1/2 Beberiæ Sulph oz 4/ Birdlime, Japan lb 1/2 Bismuthi Citras oz 1/ ", et Amm. Citras , 1/2 ", Oxid. P.B. , 11/6 ", Subcarb. , 8/10 ", Trisnit. , 8/6 Bole Armen cwt 16/ Borax , 42/ ", Pulv. , 46/ Bromine oz 8d  Cadmii Bromid oz 9d ", Iodid. , 1/3 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Calcii Chlorid lb 1/ ", Sulphas , 2d Calcis. Hydras , 8/4 ", Phosph. , 10d Calx. Chlorata cwt 20/ ", Sulpharata lb 2/8	
Bals. Canada , 2/2, , Copaib , 1/11 , Peruv , 7/8 , Sulphur , 9d , Tolut , 2/2 Barytæ Carb. Pulv. , 6d , Nitras , 6d , Pur , 1/2 Beberiæ Sulph oz 4/ Birdlime, Japan lb 1/2 Bismuthi Citras oz 1/ , et Amm. Citras , 1/2 , Oxid. P.B. , 11/6 , Subcarb. , 8/10 , Trisnit. , 8/6 Bole Armen evt 16/ Borax , 42/ , Pulv. , 46/ Bromine oz 8d  Cadmii Bromid oz 9d , Iodid. , 1/3 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Calcii Chlorid lb 1/ , Sulphas , 2d Calcis. Hydras , 8d , Hypophosph. , 4/6 , Phosph , 10d Calx. Chlorata cwt 20/ , Sulphurata b 2/8 Camphor Refined , 1/3	
Bals. Canada , 2/2, , Copaib , 1/11 ", Peruv , 7/8 ", Sulphur , 9d ", Tolut , 2/2 Barytæ Carb. Pulv. , 6d ", Nitras , 6d ", Pur , 1/2 Beberiæ Sulph oz 4/ Birdlime, Japan lb 1/2 Bismuthi Citras oz 1/ ", et Amm. Citras , 1/2 ", Oxid. P.B. , 11/6 ", Subcarb. , 8/10 ", Trisnit. , 8/6 Bole Armen cwt 16/ Borax , 42/ ", Pulv. , 46/ Bromine oz 8d  Cadmii Bromid oz 9d ", Iodid. , 1/3 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Caffeinæ Citras , 4/6 Calcii Chlorid lb 1/ ", Sulphas , 2d Calcis. Hydras , 8/4 ", Phosph. , 10d Calx. Chlorata cwt 20/ ", Sulpharata lb 2/8	

ent of Drugs, Chem	i
	JA
Cantharides lb 11/ ,, Pulv ,, 11/6 Capers lb 1/4, 1/8	C
Capers	
Cap. Papav. Alb 1,000 20/	
Capsicine oz. 1/	
Willow 1/	
Carmine oz 3/6 Caryoph. Aromat lb 1/8, 2/	
Caryoph. Aromat Ib 1/8, 2/	С
Cassiæ Pulp lb 1/6 Castor, N.A, 40/	С
Cera Alb., Block ,, 2/6	С
Castof, N.A. , 40/ Cera Alb., Block , 2/6 , , , Cake , , 2/4 , , , Japan , 1/ , Flav. Ang , 2/ , , , Jamaica , 1/9 Cerat. Calanim	
" Flav. Ang , 2/	C
,, ,, Jamaica ,, 1/9	
Cetagei 1/9	C
" Resine, 1/4	
F ,, Sabinæ, 1/10 ,, Saponis, 2/	
,, Saponis, 2/	С
Cerii Oxalas oz 4d Cetaceum lb 1/9	C
Chirata, 7d	D
Chloral Hydrat ,, 5/8	D
,, Cryst ,, 5/10 ,, Liebreich, in	
1-lb bottles 6/8	
Chlorodyne	
Chloroform, Duncan's ,, 4/8 ,, Meth ,, 2/0	
Chrysarobinum 10/	
Cinchonidine Sulph oz 1/2 Cinchonin Mur , 9d	
Sulph 9d	
" Sulph " 9d Cocaine Hydroch gr 4d Coccus Cacti, S. Grain	D
Coccus Cacti, S. Grain	D
Ib 1/9, 2/	D
Coculus Indicus cwt 24/	
Codeia	E
	E
	-
Colocynth, Tky ,, 2/	
Colocynth, Tky	
Juli, Alumau, Luiv, 1, 0/0	
" Rosæ Canin " 1/	
,, ,, Gallie ,, 1/6 ,, Sennæ ,, 10d	
" , P.B " 1/2	
Cort. Aur. Ang ,, 2/4	
,, ,, Exot ,, 1/2 ,, ,, Fine cut ,,1/10	
" Canellæ " 6d	
" " Pulv " 10d	
" Cascarillæ " 9d " " Elect. " 1/	E
" Cassiæ " 8d	1.
" " Pulv " 1/	E
" Cinch. Flav ,, 4/ " ,, Pulv. ,, 4/6	E
Parv 4/	
,, ,, Pallid lb 2/6, 3/,	
3/6   Pulv. lb 3/6	
", ", Pulv. lb 3/6 ", ", Rubr. E. I.	
1b 3/6, 5/6	
" Cinnamoni lb 3/	
,, ,, Parv. ,, 2/ ,, Pulv. ,, 3/	
", Cuspariæ", 2/6	
	_

ATIONS	OF	THE	MAR	KET.
Cort. Gra				5d
T :		 A m.m	,,	£d
7.1		Ang		/10 9d
		· · · · · · · · · · · · ·		4d
	amni i	Frangı	1. ,,	8d
" ~		'urshia		1/6
" Sim	arub. ni		•• ,,	1/8 4d
Crem. Ta	rtar	ulv.	wt 14	4/6 8/6
Creosot.	(Mor	son's).	" 15	6/6
Creta Gal	llic .		,,	6d
,, Pre	l narats	ulv	ewt.	4d   12/
Crocus, H	lysp.,	Opt	lb	48/
" P	lacen	t. ¯	,,	3/6
Croton Cl	hloral	Hyd	0Z	2/   2/4
Cupri, Ar	tras		. ,, 1	/10
	lph		cwt :	25/
,,	,, S	ec		14/
Currie Po	wder		. lb	2/
Dec. Aloe	s Co.	Conc.,	1 to 3	4/
" Cinc	chon.	Flav. (	Conc.	4/
" Hær	natox		lb [	1/2
" Pare	erræ C	onc 1 to	7 lh 3	2/4
" "	,,	1 to 1	5 ,,	7/
" "	.,,	1 to 3	81 ,, 3	14/
" "		p. 1 to	7,, 4	1/3
" "	"			3/6   <b>17</b> /
" Scor	parii"			1/4
Dextrine Digitaline	cw	rt 3 <b>0</b> / ]	per lb	5d
Digitaline	Puboc	· • • • • • • • • • • • • • • • • • • •	grain	2d 1/3
Dolichos Dulcamar	'a	• • • • • • • • • • • • • • • • • • • •	lb	8d
Elaterinu	m		07 5	20/
Emetine		. <b></b>	grain	4d
Emplast.	Amm	on	lb	1/8
T	,, 11. J.	С. Н	[yd. lb	2/
		onnæ, l .ciens	г.Б.,,	ι/8
		aridis		6/
,, I	Ferri	• • • • • • • • •	,, 1	.0d
,, (	ialbai Tudra	ni .rg	···· ,,	1/4
., 1	Melilo	t	,, -	1/4
,, (	Opii, I	P.B	,, (	3/9
		ot		.0d
	Picis Plumb	i	" <b>.</b> 1	.0d
,, ]	Resina	e		.0d
"	Robor		,,	1/
Ergota		is	· · · · ,, ·	1/8
Ergotin		• • • • • • • • • • • • • • • • • • • •		2/ 1/6
Ess. Amb	ergris		lb 48	3/
" Aura	ıntii		,,	7/6
	amot			8/6
" Cube	ebæ	Super .	,, 1	0/6   6/
,, Lime	es		,, 6	3/
" Lime	onis	l	b 4/ &	5/
" "		M. & ( Specia	ıllb	6/
" "	T.	M. & (	Co.'s	
Sr	ecial. Ila	p. W	, qt, t	8/
" чаш	па		10	9/ 1

Ess.	Violæ, Pro Syrup lb 6/
:>	Zingib. Conc , 5/
Euo	,, ,, Soluble ,, 4/6 nyminoz 5/
Ext.	Aconitilb 7/
,,	Aloes Socot, 5/
"	,, ,, Pulv ,, 6/ ,, Barb. B.P ,, 3/6
"	,, ,, Pulv ,, 4/
"	Authemidis, 4/8 Belæ Liq. B.P, 2/4
"	Belladonne, 4/6
,,	" Alcohol "16/
"	Calumbæ, 8/6 Canb. Indicus Res. oz 1/
"	Cascaræ Sagradæ " 9d
,,	Cascara Sag. Liq. lb 5/6
"	Cascarillæ ,, 12/ Cimicifugæ Liq ,, 7/
,,	Cinch. Flav. Liq. ,, 18/
,,	Coce Inq "b/b
"	" Acetic " 9/
,,	Colocynth, 18/
"	" Comp " 10/ " " Pulv " 12/
"	Conii, 2/4
,,	Copaib. Resin, 4/6 Cubebæoz 3/6
"	Digitalis 8/
,,	
"	Ergot. Liq. P.B, 3/2 ,, ,, by W. qt. 3/ Filicis Liq. P.Boz 1/ Gelsemii Alcol, 2/
"	
,,	Gentian
"	" Mollis " 2/4
"	" " P.B. " 3/
"	Hæmatox, 1/6 ,, P.B, 4/
"	Hyoscyam. Nov, 5/6
"	Ignat. Amaroz 2/4 Jaborandi, 1/10
"	Jalapælb 7/
,,	Jalapæ Resinoz 1/6 Krameriælb 10/
,,	Krameriælb 10/ Lactucælb 5/
"	Lupulilb 10/6
,,	Malt, 11d
"	Maticæoz 8d Mezerei Ether, 3/
"	Mezerei Ether, 3/ Nuc. Vomic. (Alc.) oz 1/6
,,	Opii, 2/4
"	Papav. Alb 2/8
,,	Pareir, Bravoz 1/4
"	" Liqlb 2/4 Physostigmatoz 6/6
"	Quassiæ, 9d
,,	Rhamni Frangulæ "9d
,,	" Liq. lb 3/3
,,	Rhei, 10/
"	Sarsæ, 9/
"	" Co " 7/
,,	" Liq. P.B " 8/6 Sarsæ Jam, 15/
"	" Comp. " 13/
,,	Stramonii, Semoz 1/6 , Follb 10/
"	Taraxaci, 2/
,,	" Liq, 2/6
,,	Valerian, 7/

### THOMPSON, MILLARD & CO., LIM., LONDON.

## Monthly Price Current of Drugs, Chemicals, & Pharmaceutical Preparations.

ļ		SUB
	Ferri Ammon. Chlor lb 1/9	Gu
l	,, Citras, 2/	
l	", ", Tart ", 2/4", Arsenias ", 5/	1
l	" Carb. Sacch ,, 1/	,
l	" Citras Ver ,, 2 9	,
i	", Et Quinæ Citrasoz 1/3 H'ds 1/6 10 p. c. 11d	,
	" Cit. C. Strychniaoz 6d	,
	" Iodidum " 1/	,
	,, Lactas, 3d ,, Oxid. Maglb 1/6	,
	D-wow (Hada DR)	,
	lb 1/6	,
	" Phosphas " 2/8	,
	,, Pyrophos, 6/ ,, Rubigo	,
	Sulph Com 6/	,
	10 1 LUI ID TO	,
	,, ,, cwt 24/	,
	,, ,, Granulatlb 6d ,, Valerianasoz 10d	,
	Ferrum Redactumlb 2/8	,,
	Flor Anthem Dun 11d	,,
	", Gallie lb 5d, 8d ", Arnicæ	,
	,, Rosæ Ex, 3/	,,,
	Fol. Belladon, 1/	,
	" Buchu " 9d " " Lancif " 2/	,
	" , Lancit , 2/ " Coca , 3/	,
	" Conii " 10d	,
	" Digitalis " 9d	
	" Hyoscyam (Bien.) " 8/6 " " (Annual)	91
	1b 3/6	,
	" Jaborandi " 1/6	Но
	" Maticæ " 1/4 " Sennæ, Alex., Parv. " 9d	Ну
	Elect 3/6	,,
	", ", ",lb 1/2, 1/6 ", ", E.I, 4d, 6d ", ", Tinn ,, 6d, 8d, 1/, 1/6, 1/9 ". Stramonii	); );
	,, ,, E.I ,, 4d, 6d	,,
	1/, 1/6, 1/9	,,
		,
	" Uvæ Ursi, 1/	,,
	", , Exot6d Fullers' Earth	
	· ·	91
	Gallæ Cœrul, 60/	,,
	,, Pulv lb 1/ Gelsemium, 1/4	**
	Gingerine oz 1/6	Hy
l	Glycerin, Pure No. 1lb 7d, 56-lb. $tin 6\frac{1}{2}d$	11.
	Glycerin, No. 2lb $6\frac{1}{2}$ d, $56$ -lb	Ictl
l	tin 6d	100
	Glycerin, Acid Carbollb 2/4	
l	", ", Gallic, 2/4", Tannic ", 2/	Inf
	,, Price'slb 1/11	,,
١	Glycerinum Aluminislb 1/4	,,
l	" Plumbi Suba-	,,
	cetatislb 1/10 ,, Tragacanthe ,, 1/2	"
	Gran. Parad cwt 28/	,,
	,, ,, Pulv lb 7d Guarana, 9/6	,,
	Gum Acaciæ Tky., Elect ,, 3,0	**
	,, ,, Parv. ,, 2/6	**
	", ", Selected ", 3/9" ", Sts. cwt 165/, 175/	,,
1	", ", Sts. cwt 105/, 175/ ", ", Ind cwt 90/	"
1	" Ammon., Lump lb 1	,,
-	4	

en ubj	t of	Dr	ugs,	Chei	n:
Gur	n Amı	non,	Guttæ.	lb 1/4	1 1]
"	Assa	afœtie	da Cola	,, 1/2 t ,, 2/9	
,,	Ben	zoin	lb 2	/, 3/, 3/6	3
"	Eler	ni horb.		lb 1/6 , 86	
"		,,	Pulv	,, 1/4	1
,,	Gall	oani (	Colat.	4	
"	Gam	bogi	е l	b 3/, 3/6	3
,,	Guai	,, iaci	Pulv.	lb 3/10 2/3, 3/6	)
"	Juni	peri		. lb 1/9	)
"	Kind	o o	ect.	,, 1 <sub>/</sub>	
,,	Myr	rh, Tl	xylb	1/2, 2/4	
,,				t. lb 3/ 1/6, 2/6	
"	,,	Pu	lv. lb 1	/8, 3/, 4/	
,,	Oliba	ani .		lb 1	
"	Sang	g. Dra	gon l	,, 5/ b 2/, 2/6	1
,,	,,,	,, 1	fulv. Ib	2/6, 3/6	
,,	Scan	nmon	. Alepp lb	18/. 26/	
>7		,,	"Pul	v. 1b 28/ g. ,, 42/	
"		"	", Virg	g. ,, 42/ v. ,, 44/	Į.
,,	Shell	lac Li	ver cw	t 4 $l$	
,,		" Oi " Al	ange,	, $4l \ 15/3$	
"			th Sort	s	
			Elec	b 2/, 2/6 t. 1b 3/	
"		,,	Pulv.	,, 3/6	
$\operatorname{Hor}_{\mathbf{H}_{\mathbf{z}}d}$	d Perla	at	 . Chl.)	owt 24/ lb 3/4	
,,	C. (	Creta.		,, 1/3	1
,,		id. Ru Vi	ıbr rid	oz 10d 9d	
"	Olea	as. 59	6	lb 3/4	
,,	,,	. 10	) % Morph	,, 3/9	
,,	,,			lb 10/	
,,	Oxid.	Rubr	. (Nit. 0	Ox.) lb 3/5	
,,		Flav.		,, 3/8	
,,	Perch	lor.	(Cor. S	lub.) lb 2/6	ľ
,,	Subch	lor. (	Calome	1) 3/1	
,, u.,	Sulph	. C. S	ulph x	,, 2/2 ,, 1/2	ľ
nya	logen	1 610.	A	,, 1/2	l
Icth	yocol,	Braz	il Inc	. Tb 4/6,	
		Russ		6/6, 7/6	
	,,	Trans.	16	/6, 17/6	1
	s. Anti	hem. nt. C		0.1	1
"	,,	a.	,	., 1/6	1
,,	Buch		,, W. q	1 /0	
"	,,		", W. q	t.,, 1/4	
,,	Calu Cary	1	,,	,, 1/4	
"		opn. arillæ	,,	.,, 1/4	]
,,	Chir	atæ	" W. q	1/4	
"			" W. q iv. Con	c. ,, 3/4	
,,	Cusp	ariæ	,,	,, 2/6	
"	Digit Ergo		"	,, 1/4 ,, 2/	

JATIONS OF THE MARK	E
Infus. Ergotæ Conc., W. qt. 1/1	
" Gentian " lb 1/ " Jaborandi (Conc. 1	4
to 7)lb 1/	
" Krameriæ Conc. lb 1/ " Lupuli " " 2	2/
" Maticæ " " 2	ġ,
Rhei 1/1	0
", ", W. qt. 1/	8
" Rosæ Co. " lb 2/1 " Sennæ " " 1/	0 8
" Sepentar. " " 1/	6
" Uvæ Ursi " " 1/	6
", Valerian ", " 1/ Inject. Apomorphinæ Hy-	٦
podermicaoz 1/	6
" Ergotini Hypo- dermica " 1	
" Morphiæ oz 1/	6
Insect Powder lb $1/6$ , $1/16$ Iodoform oz $1/6$	
Iodum ,, 11c	
,, Resub, 1	
Iridin, 4/6	)
Jalapinaoz 1/10	2
	1
Kali Acidulat lb 1	1
Lactucariumoz 1/3 Lactopeptine, 3/8	3
Lamellæ Atropinæ, case	1
of 100 2/3	3
,, Cocainæ, c. 100 2/3 ,, Physostygminæ ,, 2/3	3
Lapis Calamin lb 2c	ı
,, ,, Ver ,, 66 ,, Pumice, 40	_ }
" " " Pulv " 66	_ F
,, ,, ,, Extra ,, 1 Leptandrinoz 1/6	
Lichen Hybernlb 66	1
" " " Elect " 96 Lign. Guaiaci Rascwt 16	1
" Quassia Incislb 3d	l
,, ,, ,, ,, Rass ,, 1	
" Sassafras Incis … " 60 Lime Juice gal 4	
Lime Juicegal 4 Linim. Aconit., P.B, 5/6	3
,, ,, Meth, 2 ,, Æruginislb 1/4	1
" Belladon., P.B " 5/6	<i>i</i>
", ", ", Meth., 2 ", Campli. Colb 2/8	3
", ", ", Meth. " 1/2	3
" Chloroformi " 4/6 " Hydrarg " 2/4	
" Iodi, 6/8	3
,, Opii, 3/8 ,, Saponis Co, 2/8	
" Meth., 9d	
,, Sinapis Co ,, 6/ ,, Tcrebinth ,, 1/2	
. Acet 1/4	
Liq. Acidi Chromici ,, 1/8	3
" Ammon. Acet. Conc. " 1/2 " Citras " 1/4	
" " Fort. 959 " 6d	
,, ,, Citratis For- tiorlb 2	
Fortiss, 880 7d	

·	_
Liq. Antim. Chlor lb 5	
" Arsenicalis " 8	
" Arsenici Chlor "10	
" Atropia Sulphoz 10 " Bismuth, P.Blb 1/	
" Calcii Chloridi, 6	
" Calcis Chlor, 3	
", ", ",ewt 24 ", Sacchlb 96	í
" Cinch. Flav	/
", ", Pallid ", 16	/
" Coccus Cacti " 2/	
" Copaib. C. Cubeb. et	
Buchu, 3/6	j
,, Epispastic, 8/ ,, Ferri Acetatis, 66	1
E 1/6	_
,, ,, Dialysat, 1/	,
,, ,, Easton ,, 10	/
" , Lactophosph " 5/	
" " Perchlor. Fort. "10d	l
Pernit	
", ,, Persulph, 1/2	
,, Hyd. Arsen. c. Hyd.	
lb 10d	
,, ,, Nit. Acid, 2/8	
" " Perchlor " 8d	
" Magnes. Bicarb , 66	
" Morph. Acet, $3/6$ " " Bimecon " 6	
Plumbi Diaget out 2/	
,, , , , , lb 4d	į.
" Potassæ " 4d	
" " " Brandish " 6d	l
" " Permang " 8d	ι
" Santal Flv. C. Buchu	
et Cubeba, in 10 oz,	
22 oz, 40 and 90 oz	
(Hewlett's)lb 10/6	
0.1 4 0.1	
Chloreten Ad	
" Sodii Ethylatis oz 2/6	
" Strychniæ lb 2/	
" Taraxaci Pallid " 1/9	
" Zinci Chlor " 4d	
Lithiæ Carbonas ,, $1/6$	
" Citras, 1/4	
Litmus, 2/	
Lobelia Inflata, "2/	
Lupuline, 4	
Lycopodium, 2/	
Macis Opt, 4/6	-
Madder Crop, 9d	
Magnesiæ Calcin, 1/4	
", ", Pond, 3/9	-
" Calc.	
(Howard's), 5/9	
,, Carb. Pulv. cwt 56/	
" " Pond…lb 10d	
" Citras Gran., Opt. " 1/4 " Sec. " 1/2	
Bishon's 2/4	
Sulph eks ewt 8/	
(Howard's) 9/6	
,, Large, 16/	
Manganese Oxyd ,, 14/	
" Chloridlb 4/6	
,, Sulphas, 2/	
Manna, Flky. Opt. Nov.,, 6/	
,, Parv, 3/6	-
Mel. Ang	

# THOMPSON, MILLARD & CO., LIM., LONDON. Monthly Price Current of Drugs, Chemicals, & Pharmaceutical Preparations.

SUBJECT TO THE FLUCTUATIONS OF THE MARKET.

	su
Mel. Narbonnelb 10d	[ (
Rosæ, 1/8	
Menthol	
Mist. Ammon. Conc lb 4/	
" Sennæ Co " 8d Morphiæ Acet	
"Hydrochlor, 5/3	
Sulphas 5/9	
Mosch. Chin. (Pod.),105/ Grain oz 90/120/	
,, (121111111111111111111111111111111111	
Naphtha, Rect gal 5/3	
Nepenthelb 8/	
Nicotineoz 40/ Nux Arecalb 4d	
,, ,, Pulv, 8d ,, Moschatlb 4/, 5/6	
" Moschatlb 4/, 5/6 " Vomicaewt 20/	
,, Pulvlb 1/	
Oleatum Zinci, 2/6 Oleo Resina Cubebæoz 3/6	
Oleum Absynthiilb 30/	
" Æthereum " 11/	
,, Amygd. Dulc ,, 1/5 ,, Ex. ,, 1/	
., Pallid. ,, 1/9	
,, ,, Essent. ,, 30/ ,, Pure ,, 33/	
,, Artif, 2	
" Anethi Ang " 11/	
,, Anisi, Ind, 8/3 ,, Anthem. Angoz 3/	
" Cajeput, 4d	
", Calam. Aromat", 1/6 ", Carui Anglb 13/	
,, Caru Ang15 13/	
" Caryoph. Ang ,, 4/6	
,, Cassiæ, 4/9 ,, Cedar Woodoz 6d	
" Cinnamon , 4/	
", Citron	
" Copaiba Ess, 4/6	
,, Coriandoz 2/6	
,, Croton, 5d ,, Cubebæ,1/11	ľ
" Cymini Ang " 1/2 " Eucalypti Glob. lb 5/6	1
" Eucalypti Glob. 1b 5/6 " Fœniculi oz 5d	
" Geranii 7d	1
", ", Turkey ", 1/4	
, , , Gall, 3/ ,, Jasminlb 8/	
Jecor. Aselligal 4/6	1
,, ,, Pale Yellow ,, 5/6 ,, Fine ,, 7/6	
,, Non-freezing, new,, 8/	
" Juniperlb 2/2, 2/8	
, Laurilb 1/6	
,, Lavand. Ang oz 3/6	
,, Exot1b 2/6, 4/6, 8/6	
,, Macis Expoz 8d	
,, Menth. Pip. Ang. Nig. lb 38/	
,, ,, Hotch.	
lb by	
original bot. 20/6	1
" " " Exot. lb 16/	1
	_

BJEC	т то	THE	FLUCTU	,
leum			lb 36/	
,,	Myristi Neroli	icæ Extra	oz 9d   , 14/	
,,			1-oz bot.	
,,	Nucis (	Petit Gr	ain oz 3/ gal 5/	
"	Olivæ (	Int	7/6	
"	,,	"Palli	id lb 1/	
,,	Origan	ilb	gal 5/6 2/8,3/6 lb 4/6	
"	Palmæ	Pallid	,, 7d	
,,	Patcho	uli	oz 3/9	
"			lb 4d   , 12/	
,,	Pini Sy	lvest	,, 5/	
"	Pulegii	Ang Exot .	oz 5/6 lb 6/6	
,,	Rhodii		lb 6/6 oz 3/6	
,, ,,	Kicini	sec	$$ lb $5\frac{1}{2}$ d   Fins $5$ d	
,,	,, 1	Unbd.	Fins $\overline{5}$ d lb $6$ d  Fins $5\frac{1}{2}$ d lb $6\frac{1}{3}$ d  Fins $\overline{6}$ d	
"	,, ]	Elect.	lb 64d	
,,				
"	,, ]	Ital	lb 8d   Fins 7½d	
"	,,	" Tast	eless lb 8d	
,,	Rosæ C	onc	3/4	
	Rorism	arini	2/6	
"	Rutæ	Ext	ora ,, 4/   oz 10d	
**	Sabinæ	Ang	, 3/9	
,,	Samb."	Virid	,, 9á	
,,	Sant.F	lav. Exo	ot. oz 1/4	
"	Sassafr	as	Ang. 1/7  lb 3/3	
	Sinap.	Ess i Çom.	oz 2/6   lb 1/6	
"	•••	., Re		
"	Theobr	omæ æ	ect.,, 2/ , 2/ oz 3d	
"	Vctiver	t	, 20/ 13/, 15/	
pium	. Тку	1b 'ulv	lb 18/6	
s. Sæ	piæ		lb 18/6 , 10d , 1/2 , 1/2 oz 28/	
tto F	Pul Rosæ	voz	: 18/, 21/	
,,	Vir	gin	oz 28/	
хуш	er penta	· · · · · · · · · · · ·	lb 8d	
	7.0		lb 1/	
epsir	ie	olle	oz 2/	
"	Boud	ault's	,, 3/6	
"	**	Morson	's " 8/	
etrol	. Barb	a	lb 6d gr 1/	
il. A	loes. Ba	rb	lb 3/	
,,,	loes. et	, Pulv Assafœt	,, 4/	
,,	,,	Myrrh	,, 8/	
,, A	" Soc ssafœti	ot d. Co. F	,, 4/ P.B. ,, 3/4	
,, C	occiæ.		,, 3/	
", C	olocynt "		,, 12/ alv. ,, 16/	
"	,, €	t Hyoso		
			10 14/	

TIONS OF THE MARKET	
Pil. Ferri Carb 1b 2/4	ς
", ", Iodid ", 10/ ", Gamboge ", 3/	C
,, Hydrargyri, 2/ ,, Chlor. Co. ,, 3/6	C
" Ipecac. C. Scillæ ,, 4/6	I
,, Rhei. Co	
" Scammon. Co " 16/	
Pilocarpinæ Nitias, 4d	
Piper. Alb, 1/2 ,, ,, Pulv, 1/4	
" Cayenne, 1/6	
" Long "10d " Pulv " 1/	
,, ,, Pulv, 1/ ,, Nig, 10d ,, , Pulv, 1/	
Pix. Burgundewt 40/ Plumbi Acetas, 36/	
., , Purlb 10d	
,, Iodidumoz 10d ,, Nitras lb 8d	
,, ,, Pur, 1/4 Podophylli Resinaoz 1/4	
Potassa Caustica	
Potassæ Acetaslb $1/4$ ,, Bicarb, $5\frac{1}{2}$ d	
" Pulv " 6d	
" Carbonas " 6d	
cwt 46/ ,, Chloraslb 9½d	
" Chromas, 1/6	
" Nitras. Pur 7d	
,, Permang. Crys. ,, 1/3	
Prussias 1h 1/2	
,, Sulphas, 5d ,, Pulv, 6d	
Superovalas 10d	
", Tartras, 2/3 Potassii Bromid, 1/9	
,, Cyanid. Cryst. oz 1/2 ,, Iodidlb 13/6	
Potassiumoz 9/	ľ
Pot. Pourrilb 6/ Pulv. Aloes C. Canella, 1/8	
" Amgd. Co, 2/8 " Catechu Co, 3/	
,, Cinnam. Co, 4/8 ,, Cretæ Arom, 4/8	
cum Opio 5/	
" Elaterii Cooz 2/6 " Glycyrrh. Colb 1/2	
", Ipecac. Co, 5/ ", Jalap Co, 2/8	
,, Kino Co, 5/	
,, Opii Co ,, 5/ ,, Rhei Co ,, 4/	
" Scammon. Co " 28/ " Seidlitz " 1/1	
", Tragac. Co", 2/	
Quinæ Citrasoz 5/6	
" Hydrochloras " 5/	
(1-oz. vials H'ds) ,, Sulph.(Howard's)oz4/6	
in 4-oz bot. 4/4 ,, T.M.& Co.'s oz 4/3	
" " Unblched. 4/ by	
3 oz bottle	]

Т	
	Quinæ Valerianasoz 6/
	Quinetum, 3/ ,, Sulph, 3/3
	Quinidin Sulph, 2/3
	Radix Aconit. Napellb 9d
	,, Actæa Rac, 10d ,, Althææ, 10d
	Anchusæcwt 60/
	,, Aristolochia ,, 60/ ,, Arnicalb 1/
	Belladonna 8d
	" Calam. Ar. Dec. " 7d
	., Elect1/4
	" Colchici Sicc, 8d
	,, Cureumæewt 56/
,	" Enulæ " 70/
	,, ,, Pulvlb 1/ ,, Galangewt 30/
	" Gentian " 30/
	,, ,, Pulv1b 8d
	cwt 54/
	,, Glycyrrh. Reclb 1/ ,, Decort ,, 1/4
	,, ,, Decort ,, 1/4 ,, ,, Pulv.
	,, Sicc. ,, 4d
	, , , Sicc. , 4d , , , Pulv. lb 6d
l	
	" Hellebor. Albcwt 56/ " " Pulv.lb9d
	Nig8d
;	" Ipecaclb 5/3
	,, ,, Pulv, 5/9
	,, Iridis, 7d ,, Pulv, 10d
	Jalapæ
Į	", ", Pulv ", 1/4 ", Krameriæ ", 1/3
	Mezerei 9d
;	", Pareiræ Brava ,, 1/4
Į	", ", ", Inc.,, 1/6 ", Pyrethri, 1/2
3	Rhei Ang 9d
3	", ", E.I lb $1/6$ , $2/4$ ,
3	3/6, 4/6, 5/
3	,, ,, , Pulv. 1b 3/, 4/,
3	5/6
3	,, ,, Incis ,, 2/8
}	" Jam. lb 2/6, 2/10
ı	", ", Inc. lb 2/10, 3/2 ", Scillæ" lb 6d
ì	", ,, Pulv, 1/6 ", Senegæ, 3/
	" Senegæ
	,, Spigeliæ, 1/9
	Tormentill 8d
3	Valerian
)	", Zingib Afric ewt 50/ ", ", Plv. lb 10d
3	,, ,, Jamcwt 6/0/
1 3	to 12/12/ ,, ,, Pulvlb
7	1/6, 2/3
9	Raspberry Vinegarlb 9d

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Monthly Price Current of Drugs, Chemicals, & Pharmaceutical Preparations.

SUBJECT TO THE FLUCTUATIONS OF THE MARKET.

Carab Location 11- 1/4	C-4 A 11 0/0 0/0	Torok Ohio	. Ti + C
Sacch. Lactis	Spt. Ammon. Arom lb 2/2, 2/8	Tereb. Chio	Tinct. Serpentarlb 2/8
, , , Pulv , 1/6	" " B.P. lb 3/	Thymol, 2/6	" Stramonii, 2/8
,, Ustum, 6d	" " Fætid " 3/	" " lb 12/	" Sumbul, 3/
Sago, Perlat., small cwt 24/	" Armorae Colb 2/8	Tinct. Aconiti, P.B, 3/6	,, Tolu, 4/
,, large ,, 28/	" Camphor, 3/3	" " Fleming's " 6/	" Valerian, 2/4
Sal. Cheltenhamlb 1/4	" Chloroform, 3/4	" Acteæ Racemosa " 3/	,, ,, Ammon. ,, 3/4
,, Prunella, 6d	,, Cinnamomi, 4/6	,, Aloes ,, 2/4	" Veratri Virid , 4/
Salicinaoz 7d	" Juniperi Co, 2/4	" Arnicæ, 3/4	
Santonine, 10d	" Myristic. P.L , 2/2	A - C 11.7 010	
		" Assarcetida, 3/6	,, ,, Fort, 4/6
Sapo. Animalis P. B, 7d	,, ,, P.B, 3/6	,, Aurant ,, 2/4	Tonquin Beans, 4/6
" Castil. Exotcwt 38/	,, Pyroacetic, 2/6	,, ,, Recent, 3/4	Troch. Acid. Tannic, B.P., 2/8
,, ,, ,,lb 6d	" Rorismar, P.B " 3/6	" Belladon, 2/6	" Bismuth, 2/9
,, ,, ,, Pulv.,, 1/4	Stannum Granul, 2/4	" Benzoin Co, 3/6	" Catechu, 2/4
" Mollis P.B, 10d	Stanni Mur. Solut, 9d	" Buchu, 2/6	E D-1- (
Scammon. Resina, P.B. ,, 11/		C-1	,, rem Redact ,, 3/
T) 1 10/	, Ox		" Morphiæ, 3/
, Pulv. ,, 12/	Strontiæ Carb lb 8d	" Camph. Co " 2/4	,, Morphiæ et
Sem. Anethi, 7d	,, ,, Pur,, 2/	,, Cannab. Ind ,, 4/2	Ipecac, 3/
,, Anisiewt 40/, 56/	" Nitras, 8d	" Cantharid, 2/9	" Opii, 3/
" " Pulvlb 8d	" Exsiceat " 8d	,, Capsici, 3/4	" Santonini " 4/6
" Card. min1b 4/, 5/, 6/	Strychina cryst oz 3/	" Cardam Co " 2/4	,, ,, ,, ,, ,,
Deposit 1h 5/	" , Pulv. oz 2/10	C11 0/0	TT. 1 171 79 1 1
C-wwi crut 651			Ung. Acidi Borici, 1/6
,, Caruiewt 65/	Succus Belladon., P.B. 1b 1/9	,, Castor, 4/6	", ", Carbolici ,, 1/6
,, ,, Pulvlb 10d	" Conii " 1/9	" Catechu " 2/2	" " Salicylici " 2/
" Colchicilb 1/	" Hyoscyami " 3/	" Chirettæ, 2/6	" Belladonnæ " 2/3
" Conii " 9d	" Rhamni " 8d	" Chloroform Co " 3/4	" Cantharidis , 3/4
" Coriandewt 36/	" Scoparii, B.P " 2/	" Chloroformi et	G.1
,, Pulvlb 8d	" Taraxaci " 2/	Morphine ,, 2/8	,, Cetacei, 1/9
Ordania 2/6		Cinchan Co 2/0	" Elemi, 1/6
" Cydoniæ " 5/0	Sulphur Hypochlor oz 8d		,, Eucalypti, 1/8
,, Cyminicwt 32/	" Iodid ,, 1/2	,, ,, Flav ,, 3/4	", Gallæ, 1/6
" " Pulvlb 8d	,, Lotum lb 6d	" Cinnam " 2/6	" " C. Opio " 4/
" Fœniculiewt 44/	" Precip. P.B " 7d	" Cocci, 2/8	" Hyd. Ammon, 2/8
, Pulvlb 10d	Dotund over 1/1/	" Colchici Sem " 3/4	
Fœnugreekcwt 10/6	" Sublimat " 16/	Co 2/1	,, Fort ,,1/11
,, Pulvlb 6d		Carrie D.D.I. O/C	" " Nitrat " 2/
	, Vivum ,, 14/		Dil ,, 1/6
" Hyoscyami " 1/6	Suppositor. Iodoformdoz 1/	" Croci, 5/6	" " " Ox. Rub "2/10
,, Lincwt 24/	Syrup Aurant lb 10d	" Cubebæ, 4/	,, Iodi, ,, '3/
" " Farina " 15/	,, ,, Flor ,, 9d	" Digitalis, 2/4	010
" " Contus " 21/	" Calcis, Hypophos. " 2/	" Ergotæ, 3/4	D: T T T T T T T T T T T T T T T T T T T
" Santonlb 8d	Lastanhag 9/	The man A and a second of the	,, Picis Liquid ,, I
	,, ,, Lactophos. ,, Z	D-m-1-1 0/0	,, Sambuci Flor, 1/8
" Staphisagria …cwt 58/	,, Chloral, 1/4		,, ,, Virid ,, 1/2
" Stramonii	,, Croci, 1/4	" Gallæ, 2/4	,, Staphisagriæ, 1/6
Sodæ Acet. Pur, 9d	,, Ferri Bromid, 2/	" Gelsemini Semp " 3/6	" Sulphuris, 1/2
" Arseniasoz 4d	,, ,, Cit. C. Quin.,, 3/4	" Gentian Co , 2/4	,, Zinci, 1/6
" Bicarbcwt 14/, 26/	", ", Hypophos, 1/8	"Guaiaci Ammon "3/4	"Zinci Oleate "1/10
" " (Howard's) cwt 52/	T.J.J. 1//	,, Guarana, 4/	" zilidi_Oleate "1/10
" Bisulphitlb 1/6	C Onin 2/2	Hamamalia 2/6	
		II-agamam 2/0	77 177
" Bitart. Pulv " 2/4	,, ,, Lactophos. ,, 2/	" Hyoscyam " 3/9	Vanillaoz 2/6
" Carb. P.B " 6d	", ", Phosphas ", 1/3	" Iodi, 4/3	Vaselinelb $1/\begin{cases} 1 \text{ lb tins } 1/3 \\ 5 \text{ lb} \end{cases}$ , 10d
" " " Exsiceat " 9d	" " " Co. " 1/	" Jaborandi " 4/6	vaseime 10 1/ ) 5 lb 10d
" Hypophosphis … " 4/6	,, ,, Quina et.	" Jalapæ, 2/6	,, Alblb 1/11
" Hyposulphitewt 14/	Strychina	" Kino, 3/4	Veratriaoz 6/
,,lb 2d	phos, 2/	" Krameriæ, 2/8	
" Nitras Pur, 1/	" Hemidesmi, 1/	T - mi-1 O mt	Vinum Aloes
" Phosphas, B.P " 9d		T 7 ()- 2/4	,, Antim, 1/9
	,, Ipecac, ,, 1/		" Aurant. B.Pgal 5/
,,,	,, Limonis, 1/	,, Limonis, 2/6	" Colchicilb 2/2
" Crystals " 12/	,, Marubii, 1/	" Lobeliæ, 2/6	,, Ferri, 2/
" Sulphascwt 8/	" Mori, 1/4	" " ,, Æther ,, 5/	" " Citras " 1/6
" , In Casks6/6	", Papav, 10d	" Lupuli, 2/8	" Ipecac 2/
" Sulpho. Carblb 4/6	,, Pruni, 1/4	" Myrrh, 3/4	Onii
" Valerianoz 1/4	Dhamni 1/	" Nucis Vomic, 3/4	Outsian 1/0
Sodii Bromid , 3d	DL J 0.1	Onii	" Quiniæ, 1/2
T - 3: 3 1/0 1		O.:: A	,, Rhei, 2/8
" Iodidum, 1/3	" Rhei, 1/2	,, Opii Ammon, 4/	
" Sulphis lb 4d.	" Rosæ, 1/4	" Podophilli " 3/6	71 1 4 4
" , recryst ,, 8d	", Scillæ, 7d		Zinci Acetas, 2/
Sodiumoz 1/2	" Sennæ, 1/-	" Pyrethri, 3/6	" Chlorid, 3/
Sol. Ætner Nit. (1 to 7) lb 5/6	,, Tolu,, 10d	" Quassiæ " 2/2	" " Sticksoz 6d
Soy (Indian) 5d	,, Violæ ver, 1/	" Quinæ, P.B,3/10	,, Iodidoz 1/10
Spt. Æther Compositus ,, 4/	7:noil 0.1	" " Ammon ,3/10	,, Ox. Pur. Hubbuck's oz
" " Sulph , 3/8	" Zingiu, 9d	Dhoi 2/	1/3
		Sohina 2/8	
" Æther Nit. (°850) 2/10	m-1-11 Nitrol	11 - 1 - 1	,, Sulphewt 16/
" " " " Wr. qt.	Tabellæ Nitroglyccrini oz 1/8	" Scillæ, 2/4	,, Sulpho. Carblb 4/
2/9	Tamarinds lb 6d	" Senegæ, 3/	,, ,, ,,oz 5d
" " " B.Plb 3/2	Tapioca, 6d	", Sennæ " 2/6	" Valerian " 9d
		,	
	1	, , , ,	pages 35 36 37 38 and 40

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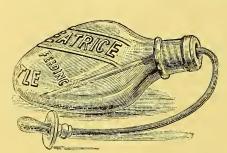
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	BATTEV W. H. & SON Transport Bandrage &c. 86
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Ì	BAILEY, W. H., & SONTrusses, Bandages, &c. 86 BAILLIERE, TINDALL & COXBooks 17 BAILY, JAPhysician's Pharmacoporia 17 BAILY, JTabella Nitroglycerin 18 BAISS BROS. & COWholesale Druggists 106 BANKS & RATCLIFFE
	BANKS & RATCLIFFE  Boyes, Staves, and Cask Heads 14
	BARBER, G., & CO. Crimson Marking Ink 169
	BARBER Concentrated Liquid Cochineal 173 BARCLAY & SONS Patent Medicines 7 BARKER. W. & SON Engravers TEXT 662
	BARNES, J. B. 172 BARNETT & FOSTER Petite Machine, 62
	Machinery, Syphons, 63, 77  BARTON BROS.  Machinery, Syphons, 63, 77  Dentifricium 26
	BARTON BROS. Dentifricium 26 BARRON, SQUIRE & CO. Manufacturina Pharmacists 104
	BARKON, SUIKE & CO.  Manufacturing Pharmacists 104 BASKERVILLE PRINTING&CO. Printing 41 BASTIN & CO. Wholesdle Druggats 115 BATES, F. W. Frizzetta 28 BATTLE, J. R. Verming 41 BAUMGARTNER & CO.  BAUMGARTNER & CO.
	BATES, F. W. Frizzetta 27 BATTLE J. B. Vermin Killer 89
	BAUMGARTNER & CO.  Brillantine Polishing Powder 28
	BEDDARD, J. Belgravia Tooth Paste 171 BEECHAM, T. Pills 143
	BEESLEY & SONS Liebig's Iodized Cod Liver Oil 129 BENGER B Invalid Foods 17
Skiet	BENNETTE & CO Manna Cake 120 BENTLEY E & SONS Onal Glass Pots 152
Spiriture.	BENTLEY, E., & SONS Medicine Chests, &c. RERNSTEIN & VOGHT Chloroform & Chemicals, 108
	BETHELL, THOS Parcel Post Boxes (Patent) 14 BETTS & CO Metallic Cansules 78
and other	BEWLEY & DRAPER Dichroic Ink 88 BIEBER, J. D. Santonine, Druggist, Hamburg 99
distraction.	BIGGLESTON Heliotrope Essence 27, 171 BIRKBECK BANK Bank and Building Society 19
Talento Per	BLAKE & MACKENZIE
Specifical Property of the Persons o	BEDDARD, I. Belgravia Tooth Pate 171 BEECHAM, T. Belgravia Tooth Pate 171 BENETITE & CO. Maria (Ack 120) BENTLEY, E., & SONS Opal Glass Pots 152 BENTLEY, E., & SONS Opal Glass Pots 152 BENTLEY, E., & SONS Medicine Chests, &c. BENNSTEIN & VOGHT, Chloroform & Chemicals 108 BETHELL, THOS. Parcel Post Baxes (Patent) 14 BETTS & CO. Metallic Capsules 78 BEWLEY & DRAPER Dichroic Ink 88 BIEBER, J. D. Santonine, Druggist, Hamburg 98 BIEBER, J. D. Santonine, Druggist, Hamburg 98 BIEBER, J. B. Santonine, Druggist, Hamburg 98 BIEBER, J. B. Santonine, Druggist, Hamburg 98 BIEBER, J. D. Santonine, Druggist, Hamburg 99 BIGGLESTON Heliotrope Essence 27, 171 BIRKBECK BANK Bank and Building Society 19 BIAKE & MACKENZIE Printing 20 BOEHM, GUS, Soan, Perf., & Menthol Charms 13, 172 BONDS DAUGHTER Surgical Bandages 171 BONDS DAUGHTER Surgical Bandages 171
	BOND'S DAUGHTER Crystal Palace Marking Ink 89 BOSTON, H. G., & CO "Household Relish" 171 BOURNE, JOHNSON & LATIMER Respirators, Druggist's Sundries 33
l	BOURNE, JOHNSON & LATIMER Respirators, Druggists' Sundries 33 BOWDEN, F. H. 49
	BOWERS BROS. Chemists' Printers 21  BOWLING & COVIED Show Fitters 53
	BRACHER & CO. "Desideratum" Mixing Machines 79
	BRADLEY & BOURDASPlate Powder 24 BRADLEY, THOMAS
	BRAND & CO. Waterproof Trusses (Improved) 86 BRAND & CO. Invalids' Foods 81 BRAMWELL, JAS. Gastric Mixture 171
l	BRAMWELL & SON Epsom Salts 172
	BRATBY & HINCHLIFFE Soda Water Plant 67 BREFFITS, E., & CO. (LIMITED)
	BREHMER, AUGFolding Cardboard Boxes
	BRITISH SYPHON CO. Syphons, Gazogenes 62
۱	BREHMER, AUGFolding Cardboard Boxes BRETT, F. J
١	The state of the s
	BROOKS, T Collapsible Tubes, Sprinkler Stoppers 59
	BROOKS, T
	BULLOCK, J. L., & CO. Pepsine 115 BURGESS, E. Lion Ointment and Pills 165
	BUCK, F. Lessons in Dentity 27, BUCK, F. Lessons in Dentity 27, BULLOCK, J. L., & CO. Lion Ointment and Fills 165 BURGESS, E. Lion Ointment and Fills 165 BURGESS, WILLOWS & FRANCIS Wholesale Druggists 104 BURGOYNE, BURBIDGES & CO. "Protoleine" Fluid Extracts 105
	BURGOYNE, BURBIDGES & CO.  "Peploleine," Fluid Methods 199
-	BURROUGHS, WELLCOME & CO. The Verdict 87
	Marigoldine, Chemicals 76
-	

to an order for insertion until countermanded,
VARY THEIR QUOTED TERMS U
BUSINESSES FOR DISPOSAL
Essential Oils, Soluble Essences, French Cream 75 BUTLER, McCULLOCH & CO.
Herbalists, Leeches, Waters 118 BYGRAVE, J. & WShop Fitter 52
CENTRAL SCHOOL OF CHEMISTRY AND
PHARMACY School 18 CENTRETON, J. Enemas 24
CENTRETON, J. Enemas 24 CETTI, E. Scientific Apparatus 156 CHAVE & JACKSON Celandine 10 CHEMISTS' AERATED WATERS ASSOCIA- TION. ACCORDANCE 73
CHESERROUGH MANUFACTURING CO.
CHEVALIER & CO.  Medicine Perles (Capsules) TEXT 662  CHISWICK SOAP CO
CHIER I C & CO
CHURCHILL, HENRY
CHURCHILL, A. & J.  Squire's Companion to the B.P. 21
CHURCHILL'S INHALANT CO., LIM. Spirone, Treatment of the Lungs 146 CLARKE, BLEASDALE & CO
CLARKE, JOHN T.  Indiarubber Stamps and Marking Ink 173
CLARKE, SNursery Lamp Food Warmers 60 CLAY, DODD & COWholesale Druggists, Liverpool 49
COCKING & CO.
Japan Agents, Peppermint Oil, Menthol 100 COCKING, T.S. Pill Machines 145 COLE, R. Ossidine, Horse Medicine 168 COLLINGHAM Drug Presses 30
COLWELL, H. M. Trusses 150
CONDRON, R. Flesh Brushes 12 CONDY & MITCHELL Condy's Fluid 8 COOPER J Lard 168
CORBYN, STACEY & COManufacturing
Pharmacists, New Drugs and Preparations Wholesele Druggists
CRAWSHAW, E., & CO
CRAVEN, M. A., & SON Confectionery, Lozenges 7 CRAWSHAW, E., & CO
CROSSLEY BROS. Otto Gas Engines 12 CROWN PERFUMERY CO. CROWTHER, GEORGE J., & CO. Nitrate, &c. 116 CROWTHER, SON Tron Liquor, and Nitrate, &c. 116
Iron Liquor, and Nitrate, &c. 116 CURTIS & SONShop Fitters 52
0
DALES, J. T
DALES, J. T. Kid Reviver 28 DANGERFIELD, F. S. Self-tgniting Match Case 29 DARKE. EDWARD. Pure Vaccine Lymph 14 DARLING W. Coffin's Dentifrice 27 DARTON, F., & CO.
Thermometers, Electric Bells, Barometers 85 DAVENPORT, J. T
DAVIS, JOHN
DANGERFIELD, F. S., Self-tgnitng Match Case 24 DARKE, EDWARD. Pure Vaccine Lymph 140 DARLING W Coffin's Dentifrice 27 DARTON, F., & CO.  Thermometers, Electric Bells, Barometers 85 DAVENPORT, J. T Chlorodyne 119 DAVIS, JOHN
Veterinarii Medicine Unests 167
DE LUCI C V
DENOUAL, J. Serew Pots and Bottles, Tuecan Olive Oil 154 DENOUAL, J. Medicinal Capsules 158 DE PASS, E. A., & CO. Petrolina 99 DE ST. DALMAS, A. CO. Petrolina 99 DE VELY Masters Francis' Bronchial Protector 150 DE VELY Masters Francis' Bronchial Protector 150
Ext. Cinchonæ Liquidum 113
DOBELL, DR.   Books 17
DR. RENNER
DUNCAN, FLOCKHART & CO.
DODD & CO. Liver Fills 142 DOULTON & CO. Filters 79 DR. RENNER Caff Lymph 140 DRYSDALE, J. W., & CO. I Chemicals, Foreign Agencies 100 DUNCAN, FLOCKHART & CO. DUNN & CO. Acetic Acid and Chemicals—Fire 116 DURRANT, GEORGE, & CO. Orange Wine and Mineral Waters 62
Orange Wine and Mineral Waters 62  E

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FENNINGS, A
FILTCH & NOTTINGHAM Leeches 169 FLETCHER, FLETCHER & STEVENSON Pharmaceutical Chemicals and Liquors for Syrups 3
FOLLOWS & BATE Druggists' Machinery, all kinds 31 FORD, SHAPLAND & CO. Printing 21 FOSTER, F. F. Moup Pills for Poultry 173 FOUGERA, E., & CO. New 1 ork Agency 95 FOULKES, W. J. THOMPOUT 173 FRATELLI DE PASOU Cement, Toitet Pouder 173 FRATELLI DE PASOU LE & CO Ess. Oils 74 FRAZER & CO. (LTD.) Sulphur Tablete 114 FREEMAN, R. C. Chlorodyne 139 FRIEDRICHSONI Aperient Mineral Vicar 89 FRY, J. S., & SOR Malted Cocoa and Cocoa Extract 79
GALZY, E
Simpson's Patent Fumigator 168 GASKELL, DEACON & CO.  Bicarbonate of Soda 117
GELDART. Dandelion Coffee, &c. 82 GEORGE & WELCH. Dandelion Coffee, &c. 82 GERARD, A. Bruihea and Toilet Specialities 22 GISSON. R. Loxenges, Sugar, &c. 169 GILBERT, W. Homocopathic Pilules & Tinctures 173 GILLOTT, J. Pens 19 GOODALL, BACKHOUSE & CO.
Yorkshire Relish, Caution 81, 82 GOULD, E., & SON Homocopathic Medicines and Sundries 165
GOULD, E., & SON  Homoopathic Medicines and Sundries 165  GRAESSER
Н
TLADDEN & CO Ratheban Toothache Cura 26
HARRER, STAGG & MOSS  HARRER, P., & CO. Manufacturing Pharmacists 115  HARRISON, W. B. Ice, Mineral Waters 78  HARRISON, W. B. Ice, Mineral Waters 78  HARRISON, E. CO. Methylatete Spirit 29  HARSTON A. & CO. Methylatete Spirit 29  HASSALL & CO. Phospho-Ciric cid 71  HASSALL & CO. Phospho-Ciric cid 71  HASSALL & T. Perfess Gloss 28  HAY, W. Soluble Ess. Lemons, Ess. Ginger 70, 76  Ginger Champagne Balsam of Horehowd  HAYWOOD, J. S. Sengical Appliances 189  HAYWARD TYLER & CO. Steam Engine 64  HEARN, RIDDELL & CO. Steam Engine 64
HAYMAN (Neath) Balsam of Horehound HAYWOOD, J. S. Sungical Appliances 159 Christmas Presents 49
Teating and other Bother 101
HEARON, SQUIRE & FRANCIS  Manufacturing Pharmacists 113  HENRY
"Herring's Unquentum Paraffinum" 112

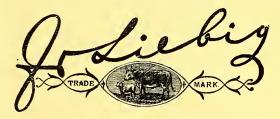
### INDEX TO ADVERTISEMENTS-Cont.

INDEX	TO	ADVERTISEME	NTS—Cont.
HOCKIN, WILSON & CO Menthol Cones 1	144   MAI	RTINDALE, WNitroglycerine Tablets 5 SON, G. & COEssence of Beef 82	SCHOOL OF PHARM. (Bloomsbury Sq.)School 18 SCHIEFFELIN'SSoluble Pills 142 SCHWENKNER, E., & CO.
HOCKIN, WILSON & CO. Menthol Cones I HE WLETT, C. J., & SON	106 MA' 46 MA'	RTINDALE, WNitroglycerine Tablets 5 80N, G., & COEssence of Beef 82 ITIER, WPlasters 51 W. SON & THOMPSONRespirators, 10- laders, 147 — Chest Protectors, 22 — Teeding	
HOLLOWAY, PROFESSORPills and Ointment HOLT, ALFRED, & CO.  Decay, Chemicals, and General Produce:	172   Ho 172   MA	naters, 147 — Chest Protectors, 252—Feeting, 157 ttles. Filters 160 WSON & SWAN Filters 160 X & BAKER Pharmaceutical Chemicals, implor Tablets, Mercurials, Ethers, Bis- tib & Signature 151	SCHWEPPE'S MINERAL WATERS C. TEXT 652 SCOTT, A. & R. Midlothian Oat Flow 144 SCOTT, J. & CO. Respirators, Opticians 45 SCOTT, W. A. Swylicd Instruments, &c. 15 SEABURY & JOHNSON Plasters and Surgical Tissues 115
HOLLOWAY, ROFE SOVE as an observable HOLT, AFRED, & CO.  Drugs, Chemicals, and General Produce HOOPER, B., CO	i MA	Y & BAKERPharmaceutical Chemicals, imphor Tablets, Mercurials, Ethers, Bis- tth &c	SCOTT, J., & CO
HOP BITTERS Caution and Guarantee HORMUSJEE, RUTTONJEE & CO.  Bombay, Chemists	MA	V POPERTS & CO	Plasters and Surgical Tissues 175 SEELEY Hard Rubber Trusses 94
HORN & SONPatent and Trade Mark Acents HORSFORD'S ACID PHOSPHATES HOSKIN, W	172 ME	ADOWCROFT. W	SELF-OPENING TIN BOX CO
HOUBIGANT Perfumery HOVENDEN & SONS Lloyd's Euxesis	22 MIS 24 MOI	CELLANEOUS ADVERTISEMENTS	SHIRKEFFS & CO. Foreign Chemists 170 SILICATED CARBON FILTER CO. Filters 162 SILICATED CARBON FILTER CO. Filters 162 SILICATED CO. W. 1882 1882 1882 1882 1882 1882 1882 188
HOWARDS & SONS Quinine and Pharmaceutical Chemicals HOWELL'S Golden Herb Pills	91 MOI 140	VISERRAT 128  RE, A. F. & H. Sponge, Twine, Chamois 172  RGAN CRUCIBLE CO.  Gravibles, Porous Pots, &c. 166, 172  RRIS, S. Stomach Drops 113  RRIS & CALLARD Naghtha &c. 116	SIMCOCK, J. S. Feeding Bottles (Screw Stoppered) 156 SIMCOCK, T. W. Bottles, &c. 48
HOWARDS & SONO Quinine and Pharmaceutical Chemicals HOWELL'S Golden Herb Pills HOWLETT, S. Shop Fitter HYNAM, J. Fullers' Earth	52 MOI 172 MOI	RRIS, S. Stomach Drops 113 RRIS & CALLARD	SMITH, J. G. "Wineral Water Makers' Manual" 62
ı	MOI MOI	AMIS & CALHARD Acetic Acid, Naphtha, \$c. 116 RRISON'S PILLS Drugs, Oil, \$ Chemicals 170 TERRIEA D & CO Benger's Evodes for SION & CO Cocco Butter Soap 22 LLEEN MAN UFACTURE Cocco Butter Soap 22 LLEEN MAN UFACTURE Patent Medicine 114 Mulledyne Patent Medicine 144 MRY Acetaci Waters 73	SEABURY & JOHNSON  Plasters and Surgical Tissues 115 SELLEY
IDRIS & CO	69 MO1 84 MU	TTERSHEAD & CO	
INGRAM & ROYLE Natural Mineral Waters INGRAM & SON			Al Cod Liver Oil, New Drugs and Preparations 137 Lime-water Suphon 88
J	MU	MFORD, G. S. Linseed, Starch, Fuller's EarthTEXT 662 NDAY, Linseed, Starch, Fuller's EarthTEXT 662 NDAY, Linseed, Starch, Fuller's EarthMarking Ink 169 RRAY, SIE JAS. Fluid Magmesia, Fluid Camphor 114	(W. Baxter, Secretary). School 18 SPONG & SON Pig Powders 188
JACKSON, ALFRED H., & CO.  Acetic Acid and Sugar of Lead  JACKSON, M., & CO. (ORME & CO.)	116 MU	RPHY, J	SQUIRE & SONSFoods, Malt Extract 5, 21 STATON & COOPERWholesale Drug Leviga-
JACKSON, M., & CO. (ORME & CO.) Scientific Apparatus JAKSON, JOHN, & CO.		N	SOUTH LONDON SCHOOL OF PHARMACY  (W. Baxter, Secretary)
Peppermint, Lavender Oil Steam Distillers	103 NEV	WBERY, F., & SONS, Sugar-coated Pills and Cuticura Remedies 41	STEVENS, P. A. White Guttapercha VI STOCKER'S FEEDING BOTTLES (BREF-
JAMES, K. Sore Throat Cure JAMES, LIEUT. Horse Blister		Cuticura Remedics 41 W CARBOLIC CO. Carbolic Powders 173 W CARBOLIC SANITARY CO., LIM. Disinfectants	STURUP & CO., Agencies, Venezuela, & Chocolate 95 SUTHERS. WM.
JAMES & CO	17 NEV	WSOME, C. Surgeons' Lint 159 WTON & CO. Photographic Apparatus and Chemicals 21 HOLSON, W. O., F.C.S. Analytical Chemist 172	Chromo Thermal Composition Essence 172 SUTTON, O., & CO
JEWSBURY & BROWN	NIC NIC	HOLSON, W. O., F.O.S. Analytical Chemist 172	SYMES & CO. (Simla) Musk and Agencies 98 SYMONDS & CO. Cigars 172
Tooth Paste St, Aërated Waters Disinfectant JOHNSON, J. H. & S. Essential Oil Musterd JONES & MASON Methylated Spirit JONES, DR. G. H. Surgeon Dentist JUDSON & SON Filters	72 14 30 OAF	CEY & SONS	SYMINGTON, THOS., & CO Coffee Essences 4
JONES & MASON Methylated Spirit JONES, DR. G. H. Surgeon Dentist LUDSON & SON SON	29 OPF 27 ORM	XEY & SONSPolishing Preparations 28 ENHEIMER & CO. Manufacturing Chemists 93 HE. J. & COScientific Apparatus 19 HDGE & COTransfer Agents 46	TALBOT & COMineral and Aërated Waters 78 TANNER & COCocaine and Salts 139
K	oss:	IDINE Horse Liniment 168	TAYLOR, E. Plasters 19 TAYLOR, T. F. J. Aërated Waters 19 TAYLOR, T. Cleansing Drinks 19 THE LONDON RUBBER PRINTING CO.
KANGRA VALLEYTea		ENT PLUMBAGO CRUCIBLE CO 166, 172	THE LONDON RUBBER PRINTING CO.  Rubber Stamps 178
Reference Almanack, Cement and Specialties KEENE & ASHWELL Homeopathic Medicines	176 PAT	ERISON, A	THOMÆ, F., & CO. Quinine, &c. 172 THOMAS Gouron Lozenges 171 THOMPSON & CAPPER
KEITH, B., & CO.  American Concentrated Medicines KEMP, W., & SON KEMPTHORNE, PROSSER & CO.	94 PE 4 48 PE 7	ARS, A. & F	THOMPSON & NORRIS MANUFACTURING COMPANY LIM. Corrugated Payer 53
KEMPTHORNE, PROSSER & CO.  Druggists in New Zealand	96 PHI	ERSON & CO. Sponge 172 LLIPS & CO. (LIM). General Merchants 170 LLIPS & CO. Rectified Spirits 29 KERING, J., & SONS New Manual Parts 20	THOMPSON & CAPPER Homocopathic Medicines and Dentifrice Water 145 THOMPSON & NORRIS MANUFACTURING COMPANY, LIM Corrupated Paper 53 THOMPSON, MILLARD & CO. (LIM.) Monthly Price Current 33, 56, 37, 38, 39, 40 TODD, ALBRIT M
KEMPTHORNE, PROSER & CO.  KENT, G. B., & SONS  KERFOOT, T	POC	OCK BROS. Needham's Polishing Paste 30 OCK BROS. Tubular Water Beds 158 SHS, H., & COShop Bottles and Jars 154 TER & CLARKE Botanic Druggists 118 VELL, THOMAS Balson of Anisced 138 VELL & BARSTOW LIST CONTROL 158 Elastic Gum Surgical Instruments	TOLLAY, MARTIN & CO. Irrigators TOMLINSON & SON Transfer Agent 46
KILNER BROS. Feeding and Dispensing Bottles KILNER BROS. Feeding and Dispensing Bottles KIMPTON, H. Books, discount	142   POT 153   POT 17   POV	THS, 11., & CO Shop Bottles and Jars 134 TTER & CLARKE Botanic Druggists 118 VELL. THOMAS Balsam of Anisced 138	TOMLINSON, R., & SONSShop Fitters by TOGGOD Inhalers, Chest Protectors, and Respirators 148
KING, ALFRED, & CO	139 POV	VELL & BARSTOW  Elastic Gum Surgical Instruments 158  CE'S PATENT CANDLE CO. (LIM.)	TOOGOOD, W.
Barff Boroglyceride, Liquid Meat KROHNE & SESEMANN Martin's Rubber Bandages		ONK, DAVIS & COVarnish Materials 29 OSSER, E., & CODruggists, Sydney 97	TOWLE, A. P.  Thornton's Toilet Cream and Chlorodyne 110  TOWNSEND, J
LA BOURBOULE		OSSER, E., & CO	THEBLE, GEO., JUN., FOOT & CO.  Shop Fitters 53  TULLY ———————————————————————————————————
LA BOURBOULE Mineral Water LATRITY Pine Woo! Productions LALOR, DR. Pine Woo! Productions LAMB & WATT Orange Wine LAMBERT, SAML, & CO. Drug and Chemical Brokers LANCASTER & SON Photographic Apparatus LANG, J. & J. Feeders, Bottles, Nymbons	95 144 QUI	ILLIAM, JOHN, & CO. Homæopathic Medicines and Plasters 165	TYLER, HAYWARD, & COSteam Engine & TYRER, P
LAMBERT, SAML., & CO.  Drug and Chemical Brokers	78 170 D 43	R	VALLET, LPatent Stoppcred Bottles 64
LANCASTER & SONPhotographic Apparatus LANG, J. & J		IMES & COEss. Composition Powder 118 NDALL & SONBlack Current Locenges 84 YNER, LShop Fitter 41	VALLET, L
		ED & CO Wholesale Druggists, South Africa 99 NSHAW Pharmacy Materia Medica 17 STUCCIA, GIOV., & COEssential Oils 170 PHARDS, JOHN M.	W. BRAND DISPENSING BOTTLES Bottles 154
LEMAITRE & CO	97 RIC	CHARDS, JOHN M.  Home and Foreign Proprietary Articles 102  CHEORD F. M. Valianthan Standard 172	W. BRAND DISPERSING BOTT LESS Dotters for WAITE & BATTMAN Transfer Agent 46 WALKER & DALRYMPLE Tes & WALKER, TROKE & CO. Change of Partnership 110 WARNER, W. R., & CO. Coated Pills and Induvin 45
Compressed Chlorate of Potash LEVERMORE, AUG., & CO. LEWIS, H. K. Books, "The Extra Pharmacopoia" LINDNER, M	6 RIN 173 ROI	IMEL, E. Perfumery Toilet Preparations 22 BBINS & CO. Methylene, & c. 108	WARNER, W. R., & CO. Coated Pills and Ingluvin 45
LEWIS, H. K. Books, "The Extra Pharmacopæia" LINDNER, M. Rubber Stamps LIERIG & CO. Lighig's Chemical Food	17 ROI 173 ROI 110 ROI	HARDS, JOHN M.  Home and Foreign Proprietary Articles 102  HFORD, E. M. Indiarubor Stamps 173  MEL, E. Merjumery Tolict Preparations 22  BBINS & CO. Methylene, 4c. 108  BERTS & CO. Foreign Patent Medicines 95  BINSON & SONS, Lint, Absorbent Wool, 5c 158  BINSON, B. M. Orange Wine, Conc. Waters  CKE, TOMPSITT & CO. Druggists, Melbourge 96	WATT, J. J., & CO
LIEBIG CO. Extract of Meat LINCOLN AND MIDLAND COUNTIES DRUG	45 RO		AND PHARMACYSchool 10
LEWIS, H. K. Books, "The Extra Pharmacopoxia" LINDNER, M. Rubber Stamps LIEBIG & CO. Liebig's Chemical Food LIEBIG CO. Liebig's Chemical Food LINCOLN AND MIDLAND COUNTIES DRUG CO. Clarke's Blood Muxture LINDSEY & SONS. Trusses and Elastic Goods LIVERPOOL PATENT LINT CO. Lint LIVERPOOL SCHOOL OF PHARMACY	150 ROS 159 ROS		WHIFFEN, T. Quinine, Salicine, Strychnine, &c. 100 WHINCUP, J. G. L
LIVERPOOL SCHOOL OF PHARMACY  School  LLOYD, A. S. Exresis	18 ROS	Heart   Hear	WIDENMANN, BROICHER & CO.  Koch's Meat Peptones 77  WILCOCKS, N. GSoda Water Machinery 66
LLOYD, A. S. Euxesis LONDON MANUFACTURING CO. LONDON HOMICOPATHIC HOSPITAL AND	60 RO	WLAND, L	WILSON & SON
LONDON HOMEOPATHIC HOSPITAL AND MEDICAL SCHOOL.  LORIMER & CO.	17 RU	MFORD CHEMICAL CO.  Horsford's Acid Phosphates 94  LANDS, DAN	WILSON & SON
LOWE, R. H. Pills LOWE, WALTER	138	Mineral Water Specialities and Machinery 65	WRIGHT, LAYMAN & UMNEY Almond Essence, Ess. Oil Camphor 145
LYNCH & CO Trusses 151, Chest Protectors  M	SAI	LTER, MRS. Home and Residence 47 NITAS CO. (LIM.) Disinfectant. TEXT 662 NSBURY, S. Lavender Water 171 NEORD & SON Vermin Killer 169	Almond Essence, Ess. Oil Camphor 145 WYLEYS & COCoated Pills, Pharmaceuticals, Wholesale Druggists 111
MACFARLANE, J. F., & CO.	SAI SAI SAI	NSBURY, S. Lavender Water 171 NFORD & SON	YARDLEY & CO. Choice Toilet Soaps 171 YATES, W. S. Shop Fitter 16 YORK GLASS CO., LIM. Patent Bottle Lettering 152
MACTAVISU & I FUMANN Espirits of Wine	29 29 SAU 96 SAU	NSBORY, S. Lavenaer water III FORD & SON Vermin Killer 169 NGER, J., & SON Patent Medicines, Price Current 34 NDERS, CHARLES Paraffinum Molle P. B. 173 VARS 127, 130	YORK GLASS CO., LIM. Patent Bottle Lettering 152 YOUNG, H. (G. Pattison, propr.) Corn Plasters 48, 57
MAIGNEN P A MAIGNEN TOTAIN THE MANCHESTER SCHOOL School of Pharmacy MANSON & SCHRAMM  Elastic Gum Surgical Instruments MARTIN, J. W Rozalium Dentifrice	19 SAV	ORY & MOORE The Lamellæ of the	ZIMMERMANN, A. & MSchering's and
MARTIN, J. W. Rozalium Dentifrice	26   SCH	ilk, &c	ZIMMERMANN, A. & MSchering's and Finzelberg's Chemicals—Iodoform, Paraldchyde 92

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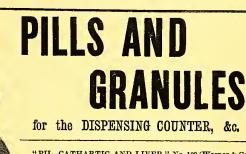
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- 10. SOUTH DEVON.—Very profitable Retail and Dispensing Business; returns at present £500 yearly; good house, well situated, large attractive garden, well stocked with fruit trees; price £450.

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  - 102 £20.
    12. SOMERSET.—Returns £1,000; price £1,000.
    13. WESTERN COUNTY.—Returns £1,350; price £1,100.
    14. SOUTH COAST.—Returns £1,200; price £1,200.
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htted; price £550.

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INDEX TO ADVERTISEMENTS, See pages 43-44.

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FOR SALE.—Extensive and highly lucrative Wholesale, Retail, and Manufacturing Chemist and Druggist's Business; very old established; present returns upwards of £25,000 a year, which could easily be doubled; capital required (exclusive of book debts) about £10,000, which might be reduced, if required, and convenient terms of payment arranged; present proprietors retiring; thoroughly bond-fide concern, and a splendid opportunity for two energetic men to acquire a fortune. Principals only dealt with, but the fullest investigation will be permitted to genuine investors. All replies must be addressed, in writing only, to M. P., care of Messrs, Rooks & Co., Solicitors, 16 King Street, Cheapside, London, E.C. London, E.C.

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AS JUNIOR; aged 18; outdoor preferred; 4½ years' good experience: excellent references; state terms. Vincont, 72A Crawford Street, W.

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WANTED, first-class Agencies in Drugs, Oils, &c., for the South of Germany, by a Gentleman about to establish himself; first-class references. Address, W. K. 5, Messrs. Deacon's, Leadenhall-street,

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Continued on page 55.

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re manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

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eart Shape	1 2 3 3 <sup>1</sup> / <sub>2</sub> 4 5	Inches, $3 \times 4\frac{1}{2}$ $4\frac{1}{4} \times 6$ $4\frac{1}{2} \times 7\frac{1}{2}$ $5\frac{1}{2} \times 7\frac{3}{4}$ $6\frac{1}{2} \times 8\frac{1}{2}$ $8 \times 9\frac{3}{4}$	d. 1 size. 1½ ,, 2 ,, 3 ,, 4 ,, 6 ,,	29 29 29 29 29 29	5. d. 0 8 1 0 1 6 2 3 3 0 4 6	5. d. 0 8 1 0 1 6 2 3 3 0 4 6	5. d. 0 8 1 0 1 4 2 0 2 8 4 0	5. d. 0 8 1 0 1 4 2 0 2 8 4 0	s. d. 1 4 2 0 2 8 4 0 5 4 8 0	3. d. 1 0 1 6 2 0 3 0 4 0 6 0
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KNEE PLAISTER	2	41×15	6 ,,	"	4 6	4 6	4 0	4 0		

No.	Size of Leather	Retail Prices.	Per doz.			
1 2 1 2	Diam. 62 in. ,, 7½ ,, ,, 63 ,, ,, 7½ ,,	d. 4 size 6 ,,	2 8 4 0 4 0 6 0			
No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.			
1 2 1 2	Diam. 63 in. 7½ ,, 63 ,, 7½ ,,	s. d. 5 4 8 0 8 0 12 0	s. d. 4 0 6 0 6 0 9 0			
	1 2 1 2 No.	Diam. 62 in.   1   Diam. 62 in.   2   72   72   72   72   73   74   74   74   74   75   75   75   75	No.   Leather   Prices.			

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" Adhæsivum		0/0	12/0			
, Ammon.c. Hydran	g 16/0			30/0	36/0	5/6
,, Antim. Pot. Tart				24/0	30/0	4/0
, Belladonna		20/0	27/0	27/0	36/0	5/6
" Calefaciens		12/0	15/0	15/0	24/0	4/6
, Cerat Saponis	8/0	9/0	14/0	14/0	24/0	4/6
" Dreadnought		10/0	14/0	14/0	24/0	4/6
" Elemi	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri		10/0	14/0	14/0	24/0	4/6
" Galhani				24/0	30/0	4/6
" Hydrarg		15/0	18/0	18/0	27/0	4/6
" Iodine				30/0	36/0	5/6
" Opii		20/0	27/0	27/0	36/0	5/6
" Picis Co		12/9	15/0	15/0	24/0	4/6
" Plumbi		6/6	12/0	12/0	21/0	4/0
" Potass. Iodid	. 16/0			30/0	36/0	5/6
" Resinæ		6/6	12/0	12/0	21/0	4/0
" Roborans		7/0	12/0	12/0	21/0	4/0
" Saponis Alb	. 5/6	6/6	12/0	12/0	21/0	4/0
*		,	,	,	, ,	

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SHOP FRONT BUILDER,

Show-Case Maker, &c.,

1830.

Lindley Street, Sidney Street, Mile End Road, LONDON, E.

EXPORT. HOME

NEW CATALOGUE sent free on receipt of Business Card.

WADE STREET CURTIS & SON, WADE STREET, and WADE LANE, LEEDS.

> ESTABLISHED 1852.

Economy, with Excellence of Design and Workmanship.

Chemists fitting up or re-fitting should write for R. Tomlinson & Sons' Illustrated List of Modern Shop Fittings of own manufacture, comprising:-

Desks and Glass Cases, from 50s.

Bent Front Counter Cases, 3 ft. long, 50s.

Ditto, ditto, 6 ft. long, 105s.

12 ft. Nest of 63 Pine Drawers, gold labels and glass knobs, £6 6s.

12 ft. Nest Mahogany ditto, £8 15s.

Dispensing Screens, from 100s.

Mahogany and Pine Top Counters. Glass Casing for Counter Fronts.

Pill Machines of First-class Make, to cut 24, 16s. 6d. each.

Bevelled Plate-glass Window Tablets.

Tooth Brush Cases from 31s. 6d.

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Shop Rounds, with enamelled Labels burnt in.

Specie Jars re-labelled.

Special Line in Marone Shop Jars.

Plate Glass Shelves for Shop Windows. Slide Pillar Dispensing Scales on Ma-

hogany Box, warranted, 19s. pair.

CHANGE OF ADDRESS :-

Midland Medical Fitting and Druggists' Sundries Warehouse, Bond Street, Constitution Hill, BIRMINGHAM. REMOVED FROM ST. PAUL'S SQUARE.



MEDICAL SHOP FITTERS AND CASE MAKERS. GUN STREET, BRUSHFIELD STREET, BISHOPSGATE, LONDON.

Send for Estimates and List of Shops Fitted in our Modern Style.

BEST WORKMANSHIP ONLY, AT PRICES THAT WILL INSURE SATISFACTION.

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PACKING BOTTLES AND FRAGILE ARTICL

Is lighter and more secure than anything yet introduced as a Parcel Post Wrapping. For transmission of filled bottles—for Quarts, roll the material three or four times tightly, and for Pints two or three times. Very small bottles require only single wrapping.

The CORRUGATED PAPER should extend half

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Roll tightly and fold in the ends. The elasticity of PARCEL the material will keep the bottle rigidly in ics place.



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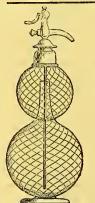
# CARRIAGE ON "SUNDRIES."

We have pleasure in stating that we first offered to pay carriage on £5 worth of "Sundries" in March, 1877. We continued to do so for nearly a year. Many of our friends who lived near London asked us to allow them 5 per cent. discount in lieu of Carriage, and many of those at a greater distance sent in so many enclosures, for which we had to debit proportion of Carriage, that we adopted the plan of allowing 5 per cent. discount on all orders of £5 worth of "Sundries."

WE ARE PREPARED TO ADOPT ANY MODIFICATION OF THIS DISCOUNT TO SUIT ANY CUSTOMER.

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Orders amounting to less than £1 in value, for conveyance per Sutton & Co., Forster's Parcel Express Co., Globe Express Co., &c., will be charged with the Booking Fee of 2d. each package, charged by such carriers when we hand the parcels to them.



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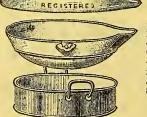
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# "MAY-ROBERTS" WATER BATH,



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.



The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

Each 3/0 ... 5 PINT. 10 PINT. 5/6 ... 9/6

### MAY, ROBERTS & CO.,

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TEMPORARY ADDRESS DURING REBUILDING OF PREMISES, 9 MOOR LANE, E.C.
TELEGRAPHIC ADDRESS—"MOAB LONDON."

### **EXCHANGE COLUMN**—continued from page 48.

### Apparatus.

Machine for mixing dry powders for sale; very cheap. X., 41 Camberwell Grove, S.E.

Nearly-new 4-grn. pill machiuc, price 10s.; oil tauk, tap, and loose lid, 2 ft. loug, 18 in. deep, 12 in. wide, 5s. Burnett, Chemist, Wolverhampton.

30-gal. galvanised-irou cisteru, narrow neck, with tap, 15s.; 40-gal. eistern, no tap, 15s.; 40-gal, eisteru (Tupholuic's), with tap, 14s.; 40-gal. eistern, galvanised iron, with tap, 15s.; Tupholme's handy oil-pump, 9s. Crook,

Fine new perfect London-made plate electrical machine, complete in case, size of plate 17 iu., cost 51. 10s., price 21. 7s. 6d., a bargaiu; powerful large air-pump, complete, on stand, suitable for school, lecture-room, or institution, in perfect order, cost 15%, price only 31. 10s., a great bargain. Miller, 102 Fortess Road, Kentish Town, London,

### Educational.

thall's "Materia Specimen's"; Wills'
"Botany," "Materia," and "Pharmacy"; Southall's Tully's "Teaching"; Pereira's "Selecta"; "New Pharmacopæia"; Attfield's "Chemistry," &c.; lowest price to first cash offer. "Chemist," Bower's Hill, Evesham.

Set of illegible autograph prescriptions (original), 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Miuor during past 12 months, 2s.; 50 questions asked of successful studeuts at last Minor, 1s. 1d.; uew "Pharmacopœia," post free 5s. 6d.; lot of cheap, almost new, books; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.

Attfield's "Chemistry," ninth edition, quite clean; what offers, cash? R.S., 67 Romilly Road, Finsbury Park, N.

For sale, back numbers of Pharmaceutical Journal, for 11 years ending 1884; offers received. 132/3.

Squire's "Companion," 13th editiou; Wills'
"Materia Medica" and "Elements of Pharmacy," each 3rd editions; all as new; £1 or offers. Claro, 7 Gordon Terrace, Harrogate

Chemist and Druggist, 1876 to 1884, inclusive; what offers? Would take lantern slides, transparencies, or anything useful in the photographic line. Luke J. Healy, Drogheda.

To Students.-Clean and perfect books, free for remittance.—Muter's "Materia Medica," 8s.; Pharmacopceia, 1867, 3s.; Squire's, 1882, 6s.; Owen's "Conspectus," 1s.; Muter's "Analytical Chemistry," 4s.; chemical labels, 6d.; "Pharmacopceia Doses," 8d.; Wills' "Materia Medica," 4s.; Barber's "Synopsis," 1s.; "Minor Notes," 4s. "Vanse," 160 Earl's Court Road, London. Garrod's "Materia Medica," 6th edition, 5s.; Fenwick's "Medical Diagnosis," 2nd edition, 5s.; Fenwick's "Medical Treatment," 2nd edition, 5s.; Fenwick's "Medical Treatment," 2nd edition, 5s.; Fenwick's "Medical Treatment," 2nd edition, 5s.; 6d.; Liston's "Surgery," 2s. 6d.; Elements of Medicine" (Carter), new, 6s.; Towne's "Chemistry," 10th edition, 4s. 6d. Walter Laidlaw, Chemist, Denny, N.B. remittance.-Muter's "Materia Medica," 8s.;

Chemist, Denny, N.B.

Have still the books advertised in last number, also Withering's "British Plants," plates, 4 vols., calf, fiue (42s.), 12s. 6d.; Liunæus' Botanical Works, 6 vols., 6s. 6d.; Squire's "Companion," 8th, 4s. 6d.; Pott's Surgical Works, 3 vols., 4s.; Smith's "Lones Plantarum," 2 folios, many plates, 5s.; Kempfer "Japanese Plants," fine plates, 10s.; homcopathic books; returnable list sent for stamp; patring carriage padd. A. Davis, Mr. everything carriage padd. A. Davis, Mr. everything carriage paid. A. Davis, Mr. Forbes Davis, Pharmaceutical Chemist, 161 Seven Sisters' Road, Holloway, N.

What offers? Pereira's "Materia Medica," 3 vols., edition 1850-1854; Redwood's "Practical Pharmacy," 1849; Picsse's "Perfumery," 1855; Bowman's "Medical Chemistry," 1855; Fresenius' "Qualitative Analysis," 1850; Griffin's "Chemical Handicraft," 1877; Crespigny's "New London Flora"; "Homepathic Review," 1864, 1865; British Plants, duplicates, 200 species; 15, 1 to 10 in London Catalogue; 35, 11 to ;30. Brown, Chemist, North Shields.

### Soda-water Plant.

Soda-water machine. Smith, Chemist, Ryc.

Barnett & Foster have some second-hand soda-water machinery of their own for sale. Apply, 26 T Eagle Wharf Road, Hoxton, N.

Second-hand soda-water plant—several in stock.
Address, Bratby & Hinchliffe, Sandford
Street, Ancoats, Mauchester.

A second-hand Liliputian Bratby & Hinchliffe Galloway machine for sale at N. G. Wilcocks', Back Street, Bath.

### Shop Fittings.

Sponge cage (Maw's brass wire), four compartments, 4 ft.6 in.; nearly new, 20s.; cost 34s. Baker, Chemist, Pimlico.

Moderu quart shop rounds, gold labels, good coudition; strong glass door; cash, or useful exchange. Smith, Chemist, Rye.

Looking-glass, 57 in. by 36 in., in broad, haud-some, moulded mahogany frame; mahogany wall-enses; bottles and jars; store-bottles &c. A.B.C., 112 High Street, Woolwich.

The eutire superior fixtures of several chemists shops and other trades for sale, that will fit any sized shop, equal to new. Lloyd Rayner, 197 City Road, E.C.

Board, substantial, in good preservation, black ground, yellow letters, "Horse and Cattle Medicines," for outside front, length 6 ft., height 3 ft., price 15s. Audrew, Chemist, Rainham, Kent.

Safe, fireproof, 30 in. high; cash drawer, good locks, all keys perfect; price 41. 10s. for prompt cash. A. C. Weaver, Dudley Road, Wolverhampton.

Surplus stock, useful in starting new shop:— handsome dispensing screen, scales, two glass cases, small carboys, show-bottles, small wall-case; sundry roots, bottles, chemicals, blue syrups; sundry perfumes at purchaser's price. Monti, 8 Young Street,

Kensington.
doz. shop bottles; 16 ft. malogany-top counter, fitted with drawers at back; 11 ft. mahogany-top counter, plate-glass cases in front, drawers under, 101.; 5 ft. ditto ditto; 17 ft. ditto ditto; 6 ft. ditto ditto; 4 ft. dispensing screen, desk, and glass case, A 31, 604.; homœpathic case with contents; brass pillar scales; pill machines; mortars; funels; 12 doz. 1-gall. store bottles, gold labelled, 12s. doz. E. Natali, 207 Old Street, London. E.C. London, E.C.

London, E.C.

Second-hand Glass.—Specie jars and covers—
Two 23½ in. scrolls and plinths, 160s.; 2, 23 in. arms and stands, 65s.; 2, 25-in. scrolls, 60s.; 1, 31-in. scroll, glass cover, 35s.; carboys, cnt stoppers—1, 16 gal., 40s.; 2, 14 gal., and stands, 3t. 10s.; 3, 5 gal., 1, 2 gal., and stands, 71s.; 3, 3 gal., 1, 2 gal., and stands, 71s. 6d.; 15 doz. rounds, washed, no labels, and 47 mazarine blue pots, ditto, one-third discount off list; 1 pair drug-scales 18s., 1 pair 15s. Hawke & Son, London. Londou.

For chemists and all trades,—Shop fittings; counters; glass-fronted counters; shop drawers, with and without labels; lookers, shelving and cornice above; bent, flat, and shelving and cornice above; bent, flat, and upright counter cases, all sizes and designs; dispensing cases; screens; desks; sponge cases; centre and exhibition cases; sodawater stands; toothorush and dentits show-cases; office and counter desks; pianoshaped counter and wall cases; wall cases, all designs; window enclosures; shop doors; carboys; specie jars; gold-labelled 'shop bottles and jars; acid and oil bottles, and all trade utensils. Shops are fitted up, and goods anpplied to any amount on the hirepurchase system, if required; shop fittings and utensils bought or taken in exchange. Lloyd Rayner, Showrooms, 197 City Road, Lloyd Rayner, Showrooms, 197 City Road,

Second-hand Fittings for Shop .- 14 ft. Square Mahogauy-fronted, except where otherwise described, 15 ft. 6 iu. dovc-tailed drawers, coverboard deal lockers, 101.; cornice and shelving, 31. 10s.; plate-glass dispensing screen, 4 ft. 6 in. by 2 ft., 3l. 10s.; wall-case, sheet-glass, deal eupboard, 6 ft. by 8 ft. 10 in., 61. 10s.; 2 counters, 14 ft. 8 in. run, deal fronts, 26 drawers and shelves, 81. 5s.: sheet-glass case, 3 ft. 5 iu. high, 30 in. wide, sheet-glass ease, 3 ft. 5 iu. high, 30 in. wide, 2L; desk and case. 45s.; 2 counter cases, circular plate-plass, 36 in. by 12 in. 50s., each; plate-glass, enclosed front, 38 in. long, 69 in. high, 3L. 10s.; 15 ft. wall-counter, 5 large drawers, deal cupboards, 3L; 2 mallogany chairs, 20s.; 3-light chandelier, 25s.; 2.2 light pendants, 25s.; 3 gas brackets, 18s. 6d.; 3 4-gallon carboys and stands, 37s. 6d.; 257 stoppered rounds and pots, labelled, 8l. 17s.; 51 squats, 14s. 4d. Hawke & Son. London. 51 squats, 14s. 4d. Hawke & Son, London.

Second - hand Fittings, - Spanish mahogany counter, 19 ft., 171.; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 101.; mahogany-fronted dovetailed drug-drawers cover-boards, grained lockers; 17 ft. 6 in., 2 nests, 74 and 14, imitation and aëratedwater shelves, 8l. 10s.; 14 ft. 5 in., 2 nests, 112, 10l.; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboards under, 12 ft. 8 in. long, 8 ft. 10 in. high, 9l.; counter-cases, as Maw's A 4-48 in. long, 27 iu. high, shelves, tablet, carving, 8l.; plate-glass case, ebonised, 73 in. by 22½, 4l. 10s.; counter-case, sloping flaps and tablet, 82 in. by 17 in., 2l. 10s.; upright Spanish mahogauy counter-case, 78 in. by 33 in., 5l. 10s.; desk and case, 26 in., 2l.; desk with brass rail, 30 in., 35s.; aëratedwater fittings, 29 in., 30s.; 2 mahogany cbairs, carved backs, 30s. Hawke & Son, Wild Court, Great Wild Street, London. Sale or Exchange,—All numbers, &c., refer water shelves, 81. 10s.; 14 ft. 5 in., 2 nests,

For Sale or Exchange.—All numbers, &c., refer to Maw's illustrated list, 1882.—Bent plater Sale or Exchange.—All numbers, &c., refer to Maw's illustrated list, 1882.—Bent plateglass counter-cases, polished mahogany, 3 ft. long, 30s., as fig. A 2; also as fig. A 3, 3 ft.long, 35s.; 3 ft. 6 in. long, 40s.; 4 ft. long, 50s.; as fig. A 5, 9l.; fig. A 6, 3 ft. long, 60s.; 4 ft. long, 70s.; as fig. A 7, 4 ft. 6 in. long, 80s.; 5 ft. long, 90s.; 6 ft. long, with table in centre, as fig. A 18, 5l. 10s.; 7 ft. ditto, ditto, 6l. 10s.; fig. A 8, 6 ft. long, 6l.; tooth-brush cases, fig. A 9, 35s.; fig. A 10, revolving front, 50s.; as fig. A 10, to open at back, 30s.; as fig. A 12, 30s.; as A 13, 3 ft. long, 60s.; 3 ft. 6 in. long, 60s.; as fig. A 15, 3 ft. 6 in. long, 60s.; as fig. A 15, 3 ft. 10ng, 60s.; 4 ft. long, 80s.; 2 ft. 6 in. long, 70s.; 4 ft. long, 80s.; as fig. A 18, 5 ft. long, 70s.; 4 ft. long, 6l.; 8 ft. long, 3l.; desks and cases, A 31, 60s.; 3 ft. long, 3 ft. high, 2 ft. from back to front, 70s.; 2 showstands, A 38, 35s. each; sponge-cases, 4 41, 60s.; A 42, 75s.; A 43, 95s.; dispensing-screens, 4 ft. long, 5l.; 7 ft. long, 5l.; 7 ft. long, 5l. 10s.; 7 ft. 6 in. long, 6l. 10s.; soda-water stand, A 59, 30s.; extra large size, 30s. E. Natali, 207 Old Street, London, E.C.

irst-rate plate-glass counter-case, 5 ft. long, as fig. A 1, 9t. 10s.; 12-ft. wall-case, stout sheet glass, stained and polished mahogany, 10t.; 11-ft. wall-case, 7t.; 7-ft. 6-in. ditto, ditto, as fig. A 86, 7 ft. high, 8t. 10s.; a bent plate-glass counter-case, 7 ft. 2 in. long, 22 in. wide, 16 in. high, 9t., worth double, silvered-glass back, and glass ends; several centre cases and exhibition cases, 6 ft. long, 3 ft. deep, 10 ft. high; 6 ft. long, 18 in. wide, black and gold, airtight; a very elaborate dispensing-screen, glass case at each side, silvered plate-glass centre, with marble slab in front; the cases have silvered-glass backs, movable shelves, and tablets on the top, with shelves the whole length of back for dispensing-bottles, 7t.; a quantity of new and second-hand drawers and wall-fixtures, very cheap; oak and mahogany-A first-rate plate-glass counter-case, 5 ft. long, of new and second-hand drawers and wall-fixtures, very cheap; oak and mahogany-fronted counters; bottles; jars; carboys; black store-bottles, japanned caps, los, doz.; shelving; pilasters; comice; lockers; a good lot of second-hand fittings, consisting of counters, drawers and shelving over; dispensing-screen; counter and desk cases; wall-case in first-class condition, ready for fixing, 504.; specie-jars, carboys, scales, &c. E. Natali, 207 Old Street, London, near Pitfield Street. Pitfield Street.

### Formulæ.

Glycerine jelly, an unequalled preparation, hright, yields doub'e cost, 2s. "Chemist," G. Ramsden, Southgate, Wakefield.

Cheap dental filling, sets hard as adamant in an hour, natural tint; case containing 48 fillings, 3s., prepaid, or formula 21s. Benedict & Co., Birkenhead Park, Birkenhead.

Whooping cough, an infallible specific; two or three applications care very bad cases; splendid proprietary; cheap; formula 2s. 6d. Benedict & Co., Birkenhead Park, Birkenhead.

The "Salisbnry" bouquet, commands immense sale; the "Churchill" houquet, extremely popular; Persian essence, an excellent composition; 2s. each. "Chemist," G. Ramsden, Southgate, Wakcfield.

Cough mixture, very effectnal (resembles Crosby's); also formula for preparation resembling Rooke's elixir, 2s. 6d. each Stephenson, Chemist, 81 Barkerend Road, Bradford, Yorkshire,

Starch polish, commands immense sale; pile powders, most successful remedy; balsam aniseed, splendid cough mixture; cough lozenges, very saleable; tic pills, never fail to relieve; cough syrup, excellent preparation for children; hooping cough mixture, seldom fails; 1s. 6d. each, 3 for 4s. "Chemist," G. Ramsden, Southgate, Wakefield.

Defy Stores, and push your own articles, (made from reliable recipes, 9d. each, or 6s. doz. :quinine and iron tonic, pleasant; glycerine cream, quarter price of glycerine, soothing and healing, not sticky; nursery hair-wash, fatal to insect life; hair restorer, clear liquid and effectual; pill coating, full instructions; teething powders, hest going, cost trifling, everyone should put them up; cost trining, everyone should put them up; limes and glycerine, inseparable; worm syrnp, very effectual; chilblain liniment, certain cure for unbroken chilblains; glycerine jelly, cheaply made; glycerine cough linctus, soothes and invigorates hronchial organs and promotes expectoration. A. Lee, 10 Queen Street, Chesterfield.

tion. A. Lee, 10 Queen Street, Chesterneld.

Reliable Recipes, wanted daily, all guaranteed genume, as supplied to over 1,000 chemists at home and ahroad; particulars of any on application; detailed list of 300, post free.

Note my advertisements these last four years in this Journal. "Satisfaction guaranteed." application; detailed list of 300, post free; Note my advertisements these last four years in this Journal. "Satisfaction guaranteed." All communications are strictly confidential, or I could give over 500 testimonials.—"Glycerine Cream," an elegant preparation for roughness of skin, invaluable to all, certain sale; "Entirely New Remedy for Toothache," gives instant ease, not injurious to other teeth; "Nigerine," jet-black, waterproof patent blacking, cheaper, sweeter and better than Nubian; "Digestive Relish," best and cheapest sauce in creation, from 5x, gallon; "Luppline Bitters," equal to American in every respect, one-third price; "Limes and Glycerine," elegant, creamy, snow-white, quite inseparable, pronounced best in market; "Foaming Dentifrice," resembles Floriline, costs one-eighth; "Rheumatic Embrocation," most excellent, cannot be surpassed in cheapness and efficacy; "Pile Powders and Ointment," cure and prevent hæmorrhoids; "Quinine and Iron Tonic," hright and unchangeable, resembles Pepper's; "Worm Syrup," entirely vegetable, pleasant and rapid action; "Ringworm Specific," certain rapid cure; "Tie Pills," unequalled in efficacy, many testimonials; "Chlorodyne," inseparable, perfectly soluble, quite equals Brown's; "Marking Ink," indelihle, no waste, creditable to seller; "Cryptzymosis," certain speedy cure for gleet, &c.; "Mist. Gonorrhea "(capivi), nauseous taste masked, unfailing remedy; "Hair-restorer" (sine sulphur), clear, sweet, economical, confidently recommended; "Liver Pills" (vegetable), gentle action, "Hair-restorer" (sine sulphur), clear, sweet, economical, confidently recommended; "Liver Pills" (vegetable), gentle action, always effectual; "Lavender Water," superb fragrance, lasting, equals Sainsbury's; "Occasional Pills" (forladies), most reliable, preferred to Widow Welch's; "Essence for Deafness," simple and effectual. Price 1s. 1d. each, 3 for 2s. 6d., 25 for 1l., post free, with full particulars for making, &c., by T.Brooks, Chemist, Louth, Lines.

Soluble essences (non-a'coholic, for mineral waters); lime-juice cordial; chlorodyne (perfectly transparent); cascara sagrada cordial; concentrated waters (1 to 40); essence rennet (permanent, no salt); hop hitters; liquor carbonis (resembles Wright's); chemical liquors for syrups (stable); lac rosarum (inseparahle, made in few minutes); iuk (resembles "Dichriot"); elixir phosphori, invigorating tonic; sponges bleached (golden yellow); liquid dentifrice (like "Floriline"); marking -ink, \*ine silver, writing executed defies chemicals; saline (Eno's or Lamplough's); magic neuralgic drops; lime-juice and glycerine (white as milk, inseparable); pill - coating, pearly white, no mastic or mucilage; crimson marking-ink; hair-restorer, colourless, no deposit, \*ine\* silver; oleum flavnm concentratum, stahle colour for pomades; soluble ginger (like Hay's); liquor copaibæ comp. c. buchu et matico (like Richardson's); liquor santal, flav. (resembles Hewlett's); taraxicum podophyllin, iron quiuine (both resemble Pepper's); many perfumes, also toilet requisites; state wants; lists issued; all inexpensive to prepare; 5s. each (6 for 14.); analyses undertaken. Readers are warned against cheap substitutes. I was first to advertise formulæ in this journal. "Analyst," Mr. Warnes, 6 Rochester Square, N.W. (Only prepaid inquiries auswered.)

### Miscellaneous.

Few French bathing caps, cheap. Harvey, Margate.

Opera-glasses, cost 3l., take 1l., or exchange for fox-terrier dog. Hadley, Shorebam.

Few harrels turpentine, colza oil, and gallipoli oil. Sneath, Chemist, Newark.

Pair scales, Maw's fig. 5; Maignen's Filtre Rapide, copper; spectacles. 141/12.

At any price, good pale cod-liver oil; half price Carlsbad; quarter-price, handsome window, enclosure. Deacon, Beckenham.

20 sacks medium-sized poppies, 2s. sack, to clear out. or exchange for drugs. James Best, Holhcach, Lincolnshire.

Root-cutter, on stand; pessary mould for 36 2 dr., 25s.; 2 carboys; 1-gal. tins; few 5, 10, and 20 oz. soap bottles. Wilks, Burnley.

cans with brass taps 10-gal.; oil cisterns 40-gal.; bound journals, 32 vols.; druggists' sundries, &c. 143/13.

rubher hicycle wheels, china handles, brass-jointed reversible hood, can be converted into a cot, never used, cost 5t. 5s.; what offers? Smith, 723 Old Kent Road, S.E.

14 lbs. iodide, slightly discolonred, 8s. 6d.; 20 lbs. os. holine, singiny discontent, os. 2021. 3 ewt. American honey; also 4 carhoys and a number of olds 'ock bottles and jars; cheap. H. Cant, High Street, Shadwell, London.

For sale, haker's large-size sifting and mixing machine, suitable for making sherbet and seidlitz; also one of Piuder's piping machines. Apply at Chemist's, 154 Upper Whitecross Street, E.C.

12 tin glycerine carboys, hold 15 gals., 2s. each; 10 new 10-gal. iron drums, 5s. each; 20 5-gal. ditto, 2s. 9d. each; quantity tin cod-liver oil casks, make good oil cisterns, 2s. 6d. each. Kemp. Horncastle.

each. Kemp, Horncastle.

Beckett's syrups, 27 1s. size, also 11 1s. 9d. size;
Tidman's 6d. salicylic soap, 27, soiled; 5
boxes 2s. Pond's soap; 8 Colman's extract
meat and malt wine, 2s. 9d.; 24 Bushhy's
neurotonic, 1s.; 6 Wiley's essence for horses,
1s. 6d., soiled; what offers? 128/20.

1 2-gal, tin still, been used for aq. lavand and
water only, nearly new, too small for present
owner, price 21s.; paint-mill, by Cranstone,
Hemel Hempstead, for making brass paste,
&c., nearly new, price 7s. 6d. William Davis,
Wholesale Druggist, Lee Street, Oldham.

Wholesale Druggist, Lee Street, Oldham.

Offers in cash, or saleable patents or sundries for following:—Maw's floats, 3 mouths, 1s. doz., 9s. gross; 6 mouths, 1s. 6d. dox., 14s. gross; millefleurs, wood violets, &c., extra quality, 8s. lb., samples 6d.; several gross long blue castor oils, filled, 2 oz. and 4 oz Bolton, Chemist, Southgate.

Studio camera, perfect condition, repeating back to take two cahinet portraits on one whole plate, exchange for Bellows' camera, with carriers for dry plates; also mahogany cigar show case, 5 plate-glass compartments, and embossed gold letters, "Choice Cigars"; what offers? George Whitehead, Whitley, Newcastle.

Cassell's "Technical Educator," unhound, 3 vols., 40 parts; "Amateur Work," perfect; Murray's Grammar; Cassell's Arithmetic; Pharmacopœia and Appendix, with all extra Examination Notes; Churchill "On Children"; Homœopathic Pharmacopœia; Spon's Receipt Book; Keats' Poems; number of 61. stund urd novels; 12 japanned tea canisters for storing; offers. Wilks, Burnley.

sters for storing; offers. Wilks, Burnley.

Taylor's flax lint, 2s. lb.; Maw's surgeon's lint, 1s. 6d. lb.; also 1 lb. ol menth. pip. ang., 25s.; 1 lb. ol amvgd. essent.. 20s.; 1 lb. ol santaflav., 17s. 6d.: 8 ozs. thymol, 10s.; 4 ozs. ol cinnamenia. 12s.; cash or exchange. Snrplus stock hought for cash or exchanged for other goods; enquiries and husiness done strictly confidential. Jones, Chemist, 69 Essex Road, Islington, London, N.

69 Essex Road, Islington, London, N.

doz. 6d. Nelson's gelatine lozenges; Eggo's
patents, list of these on application; Sanitas
Co.'s preparations.; Johnston's semolina,
1-lb. packets; Symington's pea flour, 1-lb.
packets; "Enterprize" tincture press, uew,
not used; water-bath, fig. 2 Maw's; chest
protectors; 1 40-gal. oil cistern, with tap;
lower molar forceps and elevator, by Ashs;
what offers? Allin good condition. Tansley,
Market Street, Kidsgrove, near Stoke-onTrent. Trent.

### WANTED.

Tome's Deutal Snrgery. Laidlaw, Denny, N.B. Small still. Ivatts, 21 Phihshoro' Road, Duhlin.

Highest price for old gold, silver, and dental metals. Entwisle, Shaw Street, Liverpool. Good dispensing scales and tooth-brush cope. Walker, Chemist, Liscard, Birkenhead.

5-lb. tins vaseline, 6, less or more. Price, carriage paid, to J. E. Eastman, Chemist, Tottenham.

Myer's cattle spice; good condition; low price. C. Gerring, Witney. Bentley's "Botany," 4th edition. Albert H. Hinde, Lowestoft.

Skull and cross-hones; must be good specimens.

E. Palmer, Chemist, Aylesbury.

Chemist and Drugoist, third or fourth day after issue. Clark, Chemist, Stourbridge.

Plate-glass counter cases, about 4 ft. by 2 ft. . Murch, Glastonbury.

Latest editions Gray's and Attfield's; state price. 142/25.

Window enclosure with fittings, 11 ft. by 3 ft., 3 ft. high. Griffith, Leamington.

3 ft. high. Griffith, Leamington.

Shop jars and bottles, various sizes; must be in good condition. Batch, Ramsgate.

Quart conical glass percolator; "Enterprise" tincture press; glass jars; black store bottles. Tyler, Felixstowe.

Surgeon's lamp, 2 shop chairs, and an 8-gal. pear-shaped carhoy. Full particulars to Thompson, Sparkbrook, Birmingham.

Full-sized 4-grn, pill machine, without rollers, to cut 24 or 30; in good condition; approval; state price. Marson, Stafford.

Vulcanizer in sound condition; will give a new dentist's lathe in exchange. Waddington,

Vulcanizer in sound condition; will give a new dentist's lathe in exchange. Waddington, Dentist, Thornton, Bradford.

Second-hand Muter's "Analytical and Pharmaceutical Chemistry," Muter's "Materia Medica," latest editions. Particulars to Rushton, 101 Belle Vue Road, Leeds.

The Chemist and Druggist, from January 1878 to October 1885; must be clean and complete. Sampson, Low & Co., 188 Fleet Street, London, E.C.

Marble or stone mortar, inside diameter 8 in.; scales for culinary purposes; puppy, collie preferred; cash or barter. Cubitt, Adelaide Square, Bedford. Square, Bedford.

Dutch drops, unstamped; state lowest price per gross, and send sample bottle. J. P., care of Mrs. Lennie, 11 Barony Street, Edin-

Second-hand drawers, bottles, cases, &c., suitable for small hranch; immediately. Price and particulars to Chemist," Medical Hall,

for small hranch; immediately. Price and particulars to Chemist," Medical Hall, Keighley.

In perfect condition, cheap for cash, the Chemist and Druggist Optical Association's Spectacles "A" and "F"; state number and price. Brown, Chemist, Slaithwaite.

Ointment jars (pink preferred), also shop rounds, large carboys, and sundries; state lowest price to Temple, Chemist, I Dulwich Road, Herne Hill, S.E.

### Addresses & Information Wanted.

Of a Mrs. Mayne, widow of an Indian officer; was at Buxton a few months ago; any in-formation will greatly oblige. E., care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

1885.

# NINETEENTH SEASON.

LUNG OPROTECTOR

THE

# LUNG PROTECTOR

(REGISTERED).

"An Article of Acknowledged Excellence."

The "LUNG PROTECTOR" continues to be made only from the same Fine Soft Wool which has always been used since its introduction 19 years ago. Chemists are cautioned against the coarse and inferior imitations that are pushed upon them, the sale of which can only lead to ultimate loss of trade.









LUNG PROTECTOR.

ORIGINAL PATTERN.

LUNG PROTECTOR.

LUNG PROTECTOR.

CHEST PROTECTOR.

### PRICES:

			110.0	210. 1	110. 2	210.0	7,0, 4	110.0	110.0	
Original Pattern, Seven sizes	•••	•••	14/-	18/-	26/-	34/-	42/-	52/-	60/-	per doz.
The American, Six sizes										
The Canadian, Six sizes	•••	•••	•••	22/-	30/-	40/-	50/-	60/-	70/-	,,

# FELT CHEST PROTECTORS.

All in Scarlet and White, and made in same Wool as the "Lung Protector."

Terms: All Wholesale Houses either allow a large Discount for Cash, or quote the goods at Reduced Net Cash prices.

FELT CHEST PROTECTORS, C QUALITY, single and double, each in five sizes.

At lower prices than above, and equal to BEST of other makers, but are NOT recommended.

# GEORGE PATTISON,

INVENTOR AND MANUFACTURER,

139 ST. JOHN STREET ROAD, LONDON, E.C.

Notice to the Trade.

# GENUINE EAU DE COLOGNE

MANUFACTURED BY

# JOHANN MARIA FARINA,

JULICH'S PLATZ No. 4,

A DESCENDANT FROM THE

Original Manufacturer of this Valuable Perfume, is known throughout the world as

# No. 4.

## AND SOLD BY ALL THE LEADING WHOLESALE HOUSES.

In 2 oz. Bottles.

In 4 oz. Bottles.

In 6 oz. Bottles.

In 8 oz. Bottles.

In reputed ½-Pint, Wickered.

In reputed Pint, Wickered.

In reputed Quart, Wickered.

In 4 oz. Bottles, Wickered.

# JOHANN MARIA FARINA,

JULICH'S PLATZ No. 4,

COLOGNE-ON-THE-RHINE.

By Special Appointment to the Prince of Wales and to several Imperial and Royal Courts

Possessor of PRIZE MEDALS and DIPLOMAS of the Exhibitions at LONDON, 1851; NEW YORK, 1853; LONDON, 1862; OPORTO, 1865; CORDOVA (Argentine Republic), 1871; and at VIENNA, 1873; SANTIAGO (Chili), 1871; PHILADELPHIA, 1876; CAPE TOWN (South Africa), 1877 (Gold Medal); SYDNEY, 1879; and MELBOURNE, 1880.

Sole WHOLESALE Agents for the United Kingdom and Colonies,

# FICKUS, COURTENAY & CO

ST. DUNSTAN'S BUILDINGS, GREAT TOWER STREET, LONDON.

ESTABLISHED 1810

# H. BROOKS, PEEL & CO., COLLAPSIBLE TUBE MANUFACTURERS

# PORTABLE METAL SPRINKLER STOPPER,

GLASS BOTTLES FOR PERFUMERS AND

STEAM FACTORIES:

31 Lime St., Camden Rd. (Offices), and Bartholomew Rd., Kentish Town, London, N.W.

# COLLAPSIBLE TUBES OF ALL SIZES.



For Perfumes, Artists' Colours, Soaps, Cosmetiques, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.

SOLE MANUFACTURERS AND PATENTEES OF

### PORTABLE SPRINKLER STOPPER.



With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.





The two designs, Nos. 18a and 19a, are those to which we direct special attention, as sizes being in general use; other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste.

Particular attention is called to the latest improvement in our Patent Metallic

Stopper, the "Torsion." This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable

for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been

desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country.

Orders received direct will be promptly attended to.

CAUTION .- All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 23



IMPORTANT REDUCTION in the WHOLESALE PRICE of LAMPS, FROM OCTOBER 1, 1884.

# SAMUEL CLARKE'S PYRAMID NURSERY LAMP FOOD WARMERS



1st Award, First Grand Silver Medal to Samuel Clarke, London, for his Patent Pyramid Night Lamp Food Warmer. 2nd Award, First Grand Silver Medal to Samuel Clarke, London, for his Patent Pyramid Night Lights.

PRIZE MEDAL AWARDED, LONDON, 1873.
PRIZE MEDAL AWARDED, PARIS EXPOSITION, 1867.

AWARDED AT THE HEALTH EXHIBITION, SOUTH KENSINGTON, 1884.



# Patent Pyramid

THE BURGLAR'S HORROR!!



MEDAL. World's Exposition, New Orleans.

No. 1 Holds Half a Pint of Food, besides Water.

No. 2 Holds Three-quarters of a Pint Food, besides Water. No. 3 Holds One Pint Food, besides Water.

Clarke's Hot-water Lamps.

Pyramid Night Lamps, Lacquered or Bronzed.

ds One Pint Food, besides Water.

", ,, Lights.

EXTRAS.—Porcelain Panakins, Lids, Tin Panakins, Clear Glasses, Roughed ditto, Opaline ditto.

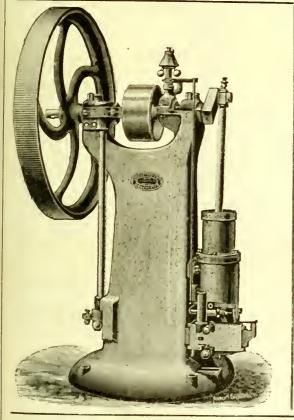
For Terms and Prices apply to the Patentee-

### " NIGHT LIGHT WORKS. PATENT "PYRAM"

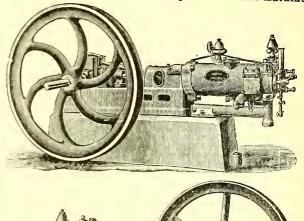
CHILD'S HILL, LONDON, N.W.

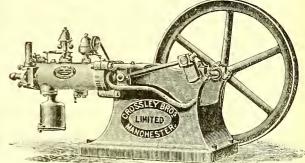
AMERICAN DEPOT: 25 & 27 EXCHANGE ALLEY, NEWARK, NEW JERSEY, U.S.A.

# "OTTO" GAS ENGINE



Consumption of Gas 25 to 75 per cent. LESS than in ANY other Gas Engine per Brake H.P. About 200 Engines driving Aerated Water Machines





OVER 15,000

29 Gold Medals. 35 Silver & Bronze Medals.

CROSSLEY'S NEW VERTICAL "

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THE ONLY GAS ENGINE WHICH RECEIVED A GOLD MEDAL AT THE PARIS ELECTRICAL EXHIBITION.

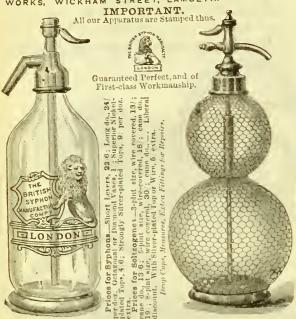
CROSSLEY BROS., LIM., OPENSHAW, MANCHESTER

London Office: 24 POULTRY, E.C. Glasgow Office: 19 RENFIELD STREET.

THE ONLY PRIZE MEDAL FOR

## SYPHONS AND SELTZOGENES

JOSTER & KOERTGEN, Proprietors, 2 Gresham Buildings, Guildhall, E.C. ORKS, WICKHAM STREET, LAMBETH. WORKS.



Seven Gold, Silver, and other Price Medals for very Superior Quality, Make, and Special Excellency of Finish. Metal beautifully Polished, and warranted free from Lead.

Annual Subscription, Post Free, 6s. Sample Copy, 8d.

The Pioneer Journal and Representative Organ of the Mineral and Aërated Water Trades.

PUBLISHED ON THE 18TH OF EACH MONTH.

J. GILBERT SMITH, 143 Queen Victoria St., LONDON.

AURANT., P.B.)

Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any elimate. In casks 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable. Sample, six stamps. Special quotations to large buyers.

Our Mineral Waters are equal to any make. Keep well. Special attention given to Export orders; quotations on application.

SODA WATER, SELTZER WATER, POTASS WATER, LEMONADE, GINGER ALE, &c., &c.

1s. PER DOZ. NETT. Free on rails, Hertford. Send 6/ for a six-dozen case. We pay Carriage on a sample case.

GEO. DURRANT & CO., HERTFORD.

## THE "LONDON-MADE" SYPHON BOTTLI

Obtained the HIGHEST AWARD at the International Health Exhibition, London, 1884.



The high reputation this bottle has achieved i due to the fact of its being in every particular the most perfect yet lar the most perfect yet introduced; and when compared with others io the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most ensily opened, the lightest pressure on the bandle being sufficient; it produces a mercal process. it produces a mcre highly-charged gaseons water than is usually obtained from syphons; it compares most favourably in appear-ance with any, and, the metal top being entirely free from lead, the prejudice against syphon drinks is at once re-moved, as the liquid passes over pure tin ouiv.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See drawing.

NOTE .... Syphone made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desident of the state of the linen. This is a deside-ratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 18s. to 21s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great convent, and great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

PRICES (WHITE, BLUE, GREEN, OR AMBER):By the gross, Less than 1 gross,

By the gross, per doz.
£1 2 0
1 1 0
1 0 0 per doz. £1 4 0 1 3 0 1 2 0 4 0

cluding Azure Blue)... 1 4 0 ... 1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished

Tops, nickel-plated and burnished for packing, except when ordered in our

patent bin case, tholding one dozen cach, price of the cach).

Please Note... 1. & F. are the only firm manufacturing Syphons in England
that do not supply them filled, and so compete with their customers' trade.

# RNETT & FOST MINERAL WATER ENGINEERS,

Manufacturing Chemists, and General Providers for the Aërated Water Wine, Beer, and Cyder Trades,

"Niagara Works," 26 Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

See also pages 63, 77, Cover iv.

PRIZE MEDALS:

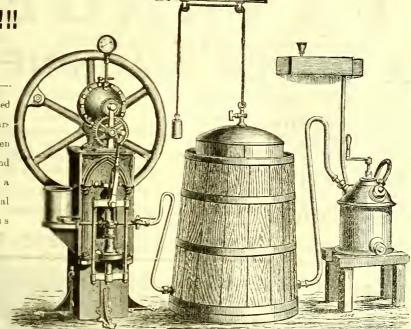
LONDON, 1862, 1873-74; PARIS, 1867, 1878; VIENNA, 1873; PHILADELPHIA, 1876; CAPE, 1877; First Award, SYDNEY, 1879-80; Four Prize Medals, Calcutta, 1884. LATEST AWARDS: -3 GOLD, 2 SILVER, AND 2 BRONZE MEDALS, INTERNATIONAL HEALTH EXHIBITION, LONDON, 1884.

ATTENTION IS CALLED TO

Specially designed for Chemists and Druggists, Hotel Keepers, Coffee Taverns, Refreshment Houses, Confectioners, and others doing a large retail business.

**OBSERVE!!!** 

This Machine originally introduced by us about 15 years since has lately been badly copied and brought forward as a novelty by the usual unscrupulous "copyists."



NOTE!!!

Those contemplating the manufacture of Mineral Waters should not be deceived into buying cheap and worthless machinery. They should not forget the fact that Sodawater Machinery like watches can be made at any price.

CAUTION .- See that our Name is engraved on each Machine. PRICE COMPLETE, £30.

This machine is capable of producing about 1,000 large bottles per day. It comprises a strong gun-metal pump, with valve-box at top; a strong copper globe, made to open if required, and fitted with blow-off valve, with connection for bottling machine; the agitator driven by toothed wheels; solution pan, &c., the whole mounted on a massive east-iron stand; a strong oak tube, iron bound; copper bell with the blow-off cock at top, pipes, and connections, forming gasometer; stout lead generator, with tinned copper agitator; gun-metal fittings and pipes; syphon box and pipe for supplying acid to generator; and all necessary requisites, including spanners to fit every bolt and nut.

Full directions and Recipes sent with Each Machine.

PRO FORMA INVOICE FOR COMPLETE PLANT :-1 "Petite" Soda-water Machine, with pipes, connections, spanners, gauges, &c. ... ... ... £30 0
Patent Filling Machine, for Foster's Patent "Intermittent" Screw-stoppered Bottle (without Syrup Pump)... 10 10 (Syrup Pump extra, £8 8s.) 5 gross Foster's Patent "Intermittent" Screw-stoppered Bottles, at 14s. 5 gross Stoppers for ditto, at 12s. ... 10 lbs. each kind of Concentrated Compounds, for Lemonade, Ginger-beer, Ginger-ale, and Orangeade, containing all ingredients except sugar ... ... 1 Hand-brushing Machine, for Bottle-washing ... ... ... at 2s. 6d. per lb. 1 10 0 Packing all the above for Export, extra, £3. £49 15 0

Bottles, for Corks, from 13/6 per gross. Corks, from 2/- per gross. CODD'S PATENT BOTTLES, 28/- PER GROSS.

Illustrated Catalogue of Soda-water Machinery and all accessories post free upon application to

WINERAL WATER ENGINEERS.

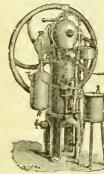
Manufacturing Chemists, and General Providers for the Aerated Water, Beer, Wine, and Cyder Trades, NIAGARA WORKS," 26T EAGLE WHARF ROAD, LONDON, N.

See also pages 62, 77, Cover iv.

CAUTION—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi Janos spring, compel him to warn the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

GOLD MEDAL

[PARIS, 1878.

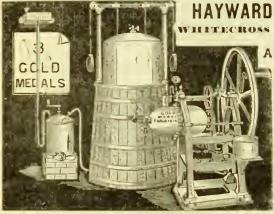


- is guaranted to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c.
- requires no skilled fabour, and can be worked by hand or steam power.
- saves 50 per cent, of materials over any other hand machine, and requires less power.
  - will last for years without repairs beyond the renewal of washers.
- - requires no gasometer, and occupies hut a quarter of the room of an ordinary
- is automatic in all its work, and merely requires the wheel to be turned.

is of the finest workmanship, and is in use all over the world.

Apply for illustrated Catalogue to

H. FAVARGER, 75° TURNMILL STREET, LONDON.



HAYWARD TYLER & CO.,

WERE AWARDED FOR AERATED WATER MACHINERY.

3 GOLD ME

PARIS,

1878. LONDON,

1884. CALCUTTA. 1884.



For Mineral Waters and Gaseous Liquids,

ROYALTY

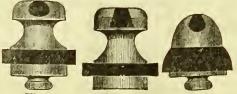


Fig. 1.

they are the most durable and inexpensive Stoppers in the Trade. Sample and Particulars sent on application to

same from the Bottlo without spoiling or removing the indiarubbe from the body of the Stopper. This is readily accomplished by the na

from the body of the Stopper. This is readily accomplished by the no fa suitable tool made to fit on the nnt; the Stopper being grasped withdrawn from the bottle in a second, without injury to the Stopper Therefore, it will be a great saving to Mineral Water Manufaturers, as by the old way of extracting the Stoppers from the Bottl when necessary, very often the Indiarnbber is spoiled, and the time takes by this slow process is worth more than the Bottle itself; so thin many instances Bottles with spoiled or dirty Stoppers are put asias worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitt with the rubber washer on, and are easily inserted into the Bottle

which the fuller washer of, and are easily inserted into the Bottle the simple pressure of the thumb, the washer at the same time foldi in the hollow part of the stem, when passing into the Bottle. They is the only Stoppers which require no tool to fit into the Bottle; a when a Bottle breaks, which seldom occurs, the Stoppers are alwestitted with washer and ready to be inserted in a new Bottle. Therefore

L. VALLET. 49 EVERTON RD., LIVERPOOL



as worthless stock.

Are now used by upwards of 1000 Soda Water Manufacturers in the United Kingdom.

PRICES (Per Gross).—Patent Stopper, sa per Fig. 1,4/6; ditto, as Fig. 6,4/6; ditto, as per Fig. 7,4/6; Teatnt Stoppered Bottles, ready for use; ditto Haff Engles, Patent Stoppered Bottles, ready for use; ditto Haff Engles, Patent Stoppered Bottles, ready for use; ditto Haff Bottles; Fig. 9, Boxwood Bottle. Opening cold and the ditto Haff Engles, Patent Stoppered Bottles, 16,1 ditto, ditted with rubbers, 10-6; Common Wood Bottle Openers, 5/6; ditto, fitted with rubbers, 1/6; Fig. 10, New Bottle Opener, 6/-. FREE.

Fig. 6.

Fig. 7.

# MINERAL WATER SPECIALITIES.

For securing Excellence and Economy in the Manufacture of Mineral Waters.

RYLANDS' Patent "Reliance" Globe Stoppered Bottles.

Superior to Codd's. Can be inclined two ways in pouring out.

RYLANDS' Patent Crystal Valve Self-Opener Bottles.

The best bottles in the world. Requires no Opener. Simple, safe, and clean. (See Engraving.)

RYLANDS' New Bulb Globe Stoppered Bottles.

A cheap but inferior bottle to the "Reliance."

CODD'S Patent Globe Stoppered Soda-Water Bottle, at reduced prices.

MANUFACTURED BY

# DAN RYLANDS (Late CODD & RYLANDS),

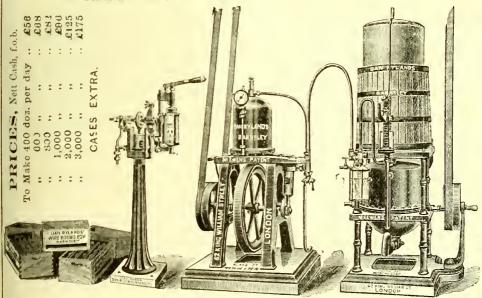
HOPE GLASS WORKS, BARNSLEY, ENGLAND,

Proprietor of the Patent Rights Codd's Patent Bottle Company, London District, and SOLE MAKER FOR EXPORT of CODD'S PATENT BOTTLES.

Proprietor of the Patent Rights and Sole Maker of McEWEN'S PATENT

GOLD MEDAL ECONOMICAL SODA-WATER MACHINERY

Which saves 30 PER CENT. in Materials, and 50 PER CENT. in Driving Power.



SOLE MAKER of MCEWEN'S PATENT

"RAPID PARAGON" TURNOVER FILLING MACHINE.

1,800 already Seld. Price, with Syrup Pump £9 9s., f.o.b. Cases extra.

SOLE MAKER of RYLANDS' PATENT WIRE-BOUND BOXES, the lightest and most service about in the Trade. Specially suitable for Hot Climates.

EVERY MINERAL WATER TRADE REQUISITE SUPPLIED.

Illustrated Cutalogues and Price Lists of Chemists' Plants, Bottles, and Boxes post free on application.

LONDON OFFICES: 62 KING WILLIAM STREET, E.C. Telephone No. 1430.

SOLE AGENT: WILLIAM BARNARD.

Barnsley Telegraphic Address-"Rylands Barnsley." London Telegraphic Address-"Rillands London."



MINERAL WATER MANUFACTORY,
PAYNES WHARF, AND

ALBION STREET, SPALDING.
BOURNE WATER.

Sleaford, September 5, 1885.

TŌ

# MR. N. G. WILCOCKS, BATEL

DEAR SIR,

We bear testimony to the excellence of the Machinery supplied to us during the last five years, having had three whole sets of plant. We are convinced we have acted wisely in purchasing from you; the last set, in which is a 24-gallon cylinder, with large double pump, extra size generator, and gasholder, is a perfect lot of machinery; and the one we are using at Sleaford has required no alteration or repairs for four years. The large double pumps require no attention, a pair of pump leathers having lasted for two years. Your "Matchless" and turn-over fillers are simple and perfect, and we have no hesitation in recommending your productions to all intending purchasers. We shall at any time be pleased to show customers our plant in full working order, now at Lincoln, Sleaford, or Spalding.

We remain, dear Sir, yours respectfully,

LEE & GREEN.

A Sample of an immense number received by N. G. Wilcocks.

# SODA-WATER MACHINERY

SPECIAL NOTICE.

BRATBY & HINCHLIFFE have pleasure in introducing to the TRADE their

# NEW "CHEMISTS" SODA-WATER PLANT.

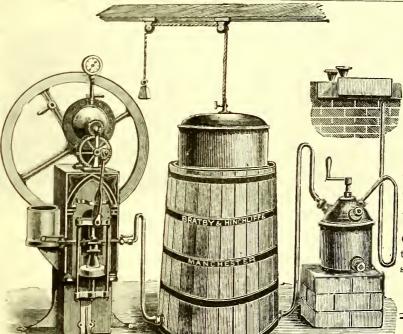
Makes all the popular Aërated Beverages.

Can be started at a minute's notice.

Suitable for Export.

Cheapest and! Best Soda-water Plant in the Market.

Specially made for "Chemists."



Guaranteed to produce pure high-class
Aërated Waters.

Full Instructions to Manufacture all kinds of Aërated Waters are given with each Plant.

Capable of manufacturing 100 doz. fullsize bottles of Aërated Waters per day.

PRICE: "Chemists" Soda-water Plant complete, £28.

Specially designed for Chemists, Hotel-keepers, and Regimental Messes. BOTTLING MACHINES, £8 extra.

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FOR AN AERATED WATER MANUFACTORY SUPPLIED.

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Mechanical Engineers, privileged in France and Abroad, 72, BOULEVARD DE LA GARE, PARIS.

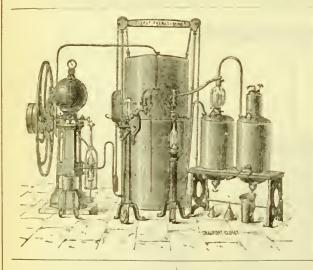
GOLD MEDAL, AMSTERDAM, 1883.

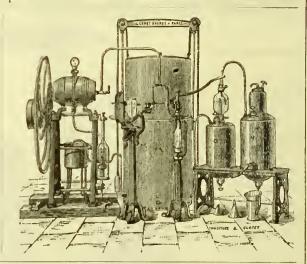
### PLANT & SYPHONS FOR THE MANUFACTURE OF AERATED BEVERAGES,

WITH ALL THE LATEST IMPROVEMENTS.

### COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.





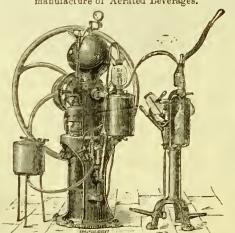
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With small levers, fittings of metal of highest quality, and best glass.



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For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



### GAZOSELTZ

For the instantaneous production of Aërated Beverages at table.

Any one can use them.



FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.

# IDRIS & GOMPANY,

MANUFACTURING CHEMISTS,

Pure Mineral Water Manufacturers,

SYPHON AND SELTZOGENE MAKERS.

## BEST GOODS. BEST PRICES.

Lime Juice Cordial	7/6 per dozen.)	ırts.
Lime Juice Cordial Limetta Cordial Palatable Lime Juice Fruit Cordials	7/6 ,,	ő
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Fruit Cordials	9/ ,,	Rep
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PURE LIME JUICE.

PURE LEMON JUICE.

NATURAL FRUIT ESSENCES.

SOLUBLE ESSENCE OF LEMON.

SOLUBLE ESSENCE OF JAMAICA GINGER.

(THE BEST ARTICLE EVER OFFERED.)

# Sparkling Phosphade

The original preparation containing Hypophosphites as certified by Professor Attfield.

THE MOST AGREEABLE OF ALL THE PHOSPHATIC DRINKS AND THE BEST SELLING ARTICLE.

THE PRINCE OF WALES.

IMPROVED SELTZOGENES.

20 per cent. off usual list prices.

ELEGANT & DURABLE SYPHONS.

IDRIS & CO.,

ASCHAM STREET, KENTISH TOWN, LONDON, N.W.

HONOURABLE MENTION.

International Food Exhibition, Agricultural Hall, London, October, 1880.

HAY

# ESSENCE SOLUBLE

(Guaranteed Pure and Free from Capsicum).

Trade Price, 5s. Od. per lb.; 12 lbs. and upwards, 4s. 6d.

Highly adapted for the manufacture of Transparent Aërated Waters, and for all Dietetic, Medicinal, and Pharmaceutical purposes.

Medical and other Opinions on

HAY'S Soluble Essence of Ginger.

"Singularly free from resin."-The Lancet.

"It should entirely super-ede the officinal preparation of the British Pharmacopois,"—Medical Press.

"This Essence is of a very delicate and beautiful appearance, the aroma is fine and powerful, and its strength is very great indeed. The flavour is really exquisite, and it concentrates in quite a remarkable degree the very best aromatic qualities of ginger. Drinks, Iondon, Sept. 1, 1884.

Medical Opinions on the Ginger Beer made from HAY'S Soluble Essence.

"An excellent effervescing drink."-The Lancet.

"Preferable to some wines we have tasted under the name of champagne." - Medical Press.

Medical and other Opinions on HAY'S Ginger Champagne. "An excellent and most agrecable beverage."\_The Lancet.

"One of the most delicate and wholesome drinks in the market."—Medical Press.

market."—Medical Press.

"The FIXE AROMA OF GINGER which Mr. Hay has eaught with remarkable success is an excellent SUBSTITUTE FOR ALOHOLA, as it gives what old port white drinkers used to call 'Hody,' and to many people, besides professed tectotallers, an occasional change at least from the ROYAL FRENCH REVERSHING EXGLISH ENVAL, is a welcome treat,"—The Chemist and Druggist.

HAY'S Ginger Alo.

"It pours ont with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger. It is a beverage which is sure to win favour wherever introduced."—The Chemis' and Druggist.

### THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the

GINGER

This Essence, which is an addition of Vanilla, Lemon, and other flavours to the above, is strongly recommended for the manufacture of the finest Ginger Beer and Ginger Ale. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour combined with the fullest amount of fragrance and pungency.

Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. 0d.

FOR THE MANUFACTURE OF GINGER CHAMPAGNE.

This Essence is a combination of the Finest Flavours, and imparts with the Ginger, a most exquisite Aroma. Trade Price, 8s. Od. per lb.; 12 lbs. and upwards, 7s. 6d.

### ESSENCE, HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the Finest Ginger, Lemon, and other flavours in a highly concentrated state. Ginger Beer and Ginger Ale made with this Essence will possess an amount of Aroma, Flavour, and Quality that have hitherto been without precedent, and that will be sure to command a large sale.

THE COST IN MANUFACTURE IS ABOUT ONE FARTHING PER DOZEN BOTTLES. Trade Price, 9s. Od. per lb.; 12 lbs. and upwards, 8s. 6d.

SUPPLIES PUNGENCY, AROMA, COLOURING, AND FLAVOURING.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts an unusually Fine Flavour and Great Brilliancy, at a cost of a little under 1d. per dozen bottles.

Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. 0d.

PREPARED BY

# W. HAY, Manufacturing Chemist, BEYERLEY ROAD,

Agents-Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists, 5 COLEMAN STREET, LONDON, E.C.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.

PATENT. ROYAL LETTERS

# HASSALL &

TO SUPERSEDE CITRIC AND TARTARIC ACIDS FOR AERATED WATERS.

Is recommended by the most eminent Physicians in Great Britain. The Best Houses in the Trade have already adopted it. It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids: it is fully £3 per cwt. cheaper than Citric and Tartaric Acids, which mostly contain lead.

### QUALITY & PRICE. WE COMPETE ON

### THE PATENTEES CLAIM FOR IT, AMONGST OTHERS, THE FOLLOWING ADVANTAGES:-

- 1. That there is no risk of prosecution, and consequent ruin of husiness, for lead contamination.
- 2. That it does not deteriorate by exposure, and will retain all its properties any length of time
- 3. The price is only 10d, per ib, in 9 and 18 gallon casks; if in smaller quantities, 18. per 1b.
- 4. It is now an established fact that the beverages made with this acid far excel all others in keeping properties, as there is not the fungoid growth that there is with other acids.

### 5. The Essences retain their strength to a greater degree.

- 6. A thoroughly clear and pure beverage is obtained, whilst a greater "body" and more fruity character is imparted.
- 7. Time and labour saved. Being in liquid form, requires only to be measured and added direct.
- 8. It is entirely free from Sulphuri 2, Hydrochloric, Nitric, Acetic, or other cheap Acids.
- 9. It does not affect the metal pipes to the same extent that Citric and Tartaric Acids do.

3-oz. Sample will be sent on receipt of postage (3 stamps), or 14 lbs. will be sent on approbation.

### Extract from the "ANALYST," the medium of communica tion between Public Analysts, for September 1884-

CITRIC and tartaric acids have long been used for acidulating or giving to mineral waters their acid flavouring, but these acids have certain disadvantages, leasmuch as their solutions cannot be kept for any great length of time without the formation of a fungoid growth, and also the extreme difficulty of obtaining more free from lead. A solution has recently been officred to the trade called the properties of which will no doubt interest Analyse Moisonous metals were entirely absent, and so also were free sulphure the properties of which will no doubt interest Analyse Moisonous metals were entirely absent, and so also were free sulphure has the declaration of the solution was clear and colouries. The maintity of phosphoric acid in a small bottle (half-pint) will amount in the properties of which I found to be the case in a sample of lemonate made with the organic acids. There is no appearance were quite as good as that made with the organic acids. There is no flavouring of lemonade and other mineral waters.

### JAMES NAPIER'S REPORT, July 30, 1884.

I examined samples for poisonous metals, especially arsenic, lead, and copper, but could not find the slightest trace. Free subburie, hydrochloric, nitric and acetic acids were also sheen! Indeed, no free acid cysts but phosphoric and citric. From analysis and cereful examination. I am of opinion that, as an article to superform analysis and cereful examination. I am of opinion that, as an article to supersede tartaric and citric acids in inheral waters, phospho-citric is in many respects superior to those acids. As well known, it is almost an inpossibility to obtain superior to those acids. As well known, it is almost an inpossibility to obtain superior to those acids. As one of the end of the complex of the end of the en

### Dr. HASSALL'S REPORT.

The Analytical Sanitary Institution, 54 Holborn Viadnet, E.C., London, June 25, 1844.

Having submitted to analysis a sample of Phospho-citric Acid, we find it to be entirely free from lead and other metallic impurities. Free sulphuric, The solution, and acetic acids were also specially tested for, and found to be absent. The solution was clear, colouries, and, when sufficiently diluted, possessed an agreeable flavour, it is evident from the foregoing particulars that this preparation facture of activities and certain and citric acids, commonly comployed in agreeable flavour, it is evident from the foregoing particulars that this preparation facture of activities and cartain and citric acids, commonly employed in form metallic contaminalisted and acrated waters; while in its cheapness, freedom from metallic contaminalisted and acrated waters; while in its cheapness, freedom from metallic contaminalist, and in the circumstance that it would tend to produce be reverages made with the form of a greater length of time as there would be not be reduced to the development of the fungoid growth frequently observable and Austraces.

Phospho-citric Acid offers very conservable advantages.

Author of "Food: its Adulterations and Methods for their Detection."

The above leads a configured by France County Clayton. F.C.S. vo. 80.

The above is also confirmed by Enwin Godwy Clayton, F.C.S., &c., &c.

### Professor JUSTUS VON LIEBIG,

Equally well known in England and Germany, says: Phosphoric Acid is a never-failing ingredient of all the organised structures of the animal body. The substance of muscular fibre, the fibrine of the blood, the pulmonary tissues, the liver and the kiducys contain an amount of phosphoric acid in chemical combination. The hones of the vertebrata contain more than half their weight of phosphotes of lime and magnesia. The substance of the brain and the nerves contain phosphoric acid. The blood contains under all circumstances a certain amount of phosphoric acid.

### Dr. WILLIAM B. CARPENTER

Snys: Phosphorous exists in combination with alhuminoid compounds, and in all animal substances composed of these. The proportions of phosphorus in the brain is considerable, leding from 8 to 18 parts in 1,000 of the whole mass, or from 1-20th to 1.30th of the whole solid matter. It seems to be unusually deficient in the brains of

Gentlemen.—We have tried the Pho-pho-citric Acid and have much pleasure in pronouncing it a decided success. It is free from any objectionable flavour or taint, and being in liquid form is a great boon, as the time and trouble in weightened dissolving the other acids is a consideration in the busy time. We consider all net acids is a consideration in the busy time. We consider all the water makers will find it greatly to their advantage to adopt the use of it.—Yours sincerely, R. O'DONNELL & CO.

it.—Yours sincercly, R. O'Donnell & Co.

66 Mydelton Street, London, E.C., August 20, 1885.

Gentlemen.—After fifteen months' continuous use of your acid we have much pleasure in testifying to its excellence. We find it possesses all the properties required by us for our trade, and is at the same time a great saving in time and expense.—Yours respectfully, R. MAYER & SONS.

Gentlemen.—We have now been using your Phospho-citric Acid over fourteen months, and have much pleasure in stating that we like it very much. It is certainly easier to work with than citric and much cheaper. We can find no fault whatever with it.—Yours truly, T. WATS.

Catherine Street, Strand, May 7 1885.

Catherine Street, Strand, May 7, 1885.

Gentlemen,—We have much pleasure in stating we have used your Phosphocitric Acid for several months, and find it a great improvement to the flavour of the lemonade, S.c., also about 70s, per cwt. less than citric acid crystals. It is also a great boon in the saving of time, as it is always ready for instant use.—We are, yours respectfully, W. R. LISTER & CLEMOW.

Newcastle-on-Tyne, August 28, 1885.

Gentlemen,—I have now been using your Phospho-citric Acid for a considerable time, and have much pleasure in saying that it is the best and most economical article for the purpose I have met with. In my opinion it is far superior to drilinary acids, producing a better beverage, and far easier to manipulate.—Yours truly, W. GLENDINNING.

Cathay. Bristol, August 12, 1885.

Gentlemen.—I have used your Phospho-citric Acid dully for the last ten months with a rapidly-increasing business, to the satisfaction of my customers and profit to myself, being only about half the cost of the other acids and ready for instant use, it gives me every satisfaction.—Yours respectfully, C. E. BEAVIS.

Gentlemen.—I am happy to inform you that I bave tried your Phospho-citric Acid, and I find it ouite as good as you represent it to be. It saves labour, and is little above half the price of citric and tartaric acids. The cask I ordered last week is to hand.—I remain, yours respectfully, THOMAS FORSTER.

SCORES OF TESTIMONIALS MAY BE SEEN AT ANY TIME.

Sole Agents for Australia and New Zealand-

LAWRENCE & O'FARRELL, 86 Queen St., MELBOURNE. HERBERT RAYMOND, 26 Exchange, Pitt St., SYDNEY.

HASSALL & CO., No. 1 WAREHOUSE, GT. NORTHERN GOODS DEPOT, LONDON.

MEBIT, for superiority of quality, ury & Brown at the Exhibition of t Owens College, Manchester, on Meeting of the British Medical

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### WSBURY BROWN

MANCHESTER

# WATERS.

SODA, SELTZER, POTASH, LITHIA, &c., LEMONADE.

AND GINGER ALE, QUININE

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for purity and excellence of quality by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the Lemonade and Ginger Ale being procured from the fresh Fruit and Finest Jamaica Ginger, they may be relied upon as furnishing delicious and catisfactory beverages, either for general use or specially for invalids.

The Soda Water is absolutely free from any metallic impregnation, and being by improved

machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of Pure Carbonate of Soda, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The Seltzer, Potash, and Lithia Waters are prepared with the utmost exactitude and the purest ingredients.

The New Quinine Tonic furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B.-Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street MANCHESTER.

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Celebrated Deresinized

# ESSENCE OF GINGER ALE.

THE FINEST ESSENCE NOW OFFERING THE MARKET.

PRICE 8/- per lb., Carriage Paid.

T. W. BROOM, Kingsland Ed., BIRKENHEAD.



SPECIALLY PREPARED FOR THE DISPENSARY.

Samples and Terms on application to

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WESTON-SUPER-MARE.

HIGHLY COMMENDED BY THE "LANCET."

Colonial and Foreign orders promptly executed.

# V. MEADOWCROFT,

AND ALL OTHER REQUISITES FOR THE MANUFACTURE OF HIGH-CLASS AERATED

Agent for Galloway's Soda Water Machinery and Hassall's Phospho-Citric Acid. WRITE FOR PRICE

W. MEADOWCROFT, Old Bank Street, BLACKBURN, LANCASHIRE.

A CERTIFICATE OF Sanitary Institute of PRACTICAL TRIAL A AND Great MERIT t Britain, after a deferred EXAMINATION, July 4th, awarded by the British

TELEPHONE NO. 7547.

Telegraphic Address-RUBINE LONDON.

FROM THE

### CHEMISTS' AERA'I INERAL WATERS

ASSOCIATION, LIMITED,

45 GIFFORD STREET, LONDON. SUN FACTORY, BRISTOL. MONTPELLIER WORKS, STARBECK, HARROGATE.

# TO THE CHEMISTS, UNITED KINGDOM.

GENTLEMEN, I beg to inform you that 285 Chemists have joined the Association during the past year, making the present total number of members 1,193. The following are the increases number of members and dividends for the past four years-

•		Dividends		Dividends No. of Members				°S		$D_i$	iv <b>i</b> den	ds	No.	of Members	;
1882		33			615							908			
1883		5			708		1885	 • • •	G			1193			

Comment is unnecessary.

I am, Gentlemen,

Yours faithfully,

SECRETARY.

P.S.—The amount of dividends for 1885, payable January 1, 1886, will be placed to the credit of open accounts unless applied for on or before December 1, 1885.

PURVEYORS BY SPECIAL APPOINTMENT TO HER MAJESTY THE QUEEN.

# **MUMBY'S**

Are Perfectly Pure and of First-class Quality.

SODA WATER, POTASS WATER, SELTZER WATER, TONIC WATER, GINGER ALE, LEMONADE, &c.

IMPORTANT TESTIMONIAL.

H.M.S. "SERAPIS," Portsmouth, 25th May, 1876.

Messars. C. MUMBY & Co.,
Gentlemen,—The Soda Water supplied by you for the use of H.R.H.

The PRINCE OF WALES on board H.M.S. "Scrapis" was of excellent uality, kept in good condition, and gave great satisfaction to His Royal Highness, his suite, and the officers of the ship.

THOMAS BRADBRIDGE, Paymaster. (Signed) T. W. SCADDAN, Chief Steward.

These Celebrated Waters can be supplied in Syphons with Silver-plated Tops.

GOODS CARRIAGE PAID. PRICES ON APPLICATION.

34 THE HARD, PORTSM

# TALBOT & CO.'S



LONDON AGENTS -

MESSRS, HOGBEN & CO., 36 GRACECHURCH ST.

Unrivalled for fine Aromatic Flavour. Write for Samples for comparison, which is the most satisfactory way of testing.

GOODS SPECIALLY PREPARED FOR EXPORT, AND GUARANTEED

TO KEEP IN ANY CLIMATE IF PRESERVED FROM FROST.

GLOUCESTER. Manufactory:

C. W. FIELD.

MANUFACTURING CHEMIST. SPICE, SEED, & DRUG GRINDER,

OFFERS:-

CAPSICINE GINGERINE SAPONINE

OIL OF CLOVES

Address—Cambrian Mills, Wood Street, LIVERPOOL.

NEW AND IMPORTANT DISCOVERY.

### TINGER ALE FROM PURE JAMAICA GINGER.

IRE GINGER ALE, Pure Jamaica Glight, is Non-THE from 1

F.O.B. Drs. J. H. H. HERNER, I BSOLUTEL Analysis by I AE Sos A

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour

MESSRS. HARSTON & CO., OF LEEDS.

"The National Table Waters."

"ABSOLUTELY PURE."

ESTABLISHED 1825

REGISTERED.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale. For Gout: Lithia Water, and Lithia and Potass Water.

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HOSKIN,

NEW STREET, HUDDERSFIELD. MILLS, SUGAR

# FRATELLI DE PASQUALE&

LARGO MUNIZIONE, MESSINA, SICILY,

MANUFACTURERS, ESTABLISHED ON THE VERY GROWTH PLACE, FOR THE FINEST

Of Lemon, Bergamot, Sweet and Bitter Orange. Recently Awarded at the Exhibitions of

CALTANISETTA, 1879—A Gold Medal and 200 Liras for Invention of Machinery to the use of their Manufactory, and Silver Medal for Excellence of

MILAN, 1881-A Bronze Medal for Excellence of Produce.

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A first trial order is quite sufficient to remain convinced of the Excellence of our Essences. Samples and all particulars may be had from our Wholesale Agents-

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# W. J. BUSH & CO.,

MANUFACTURING CHEMISTS,

DISTILLERS AND IMPORTERS OF

# ESSENTIAL OILS AND FRUIT ESSENCES,

INVENTORS OF

SOLUBLE ESSENCES FOR AËRATED WATER

AND CORDIAL MANUFACTURERS.

# FRENCH CREAM GUM EXTRACT,

PROTECTED BY ROYAL LETTERS PATENT,

For producing a head of Creamy Richness upon all kinds of Syrups, Aerated Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.

W. J. BUSH & CO. regret having to Caution the Trade against spurious imitations of this article, most of which are mere rubbish.

# W. J. BUSH & CO.'S ENGLISH DRAWN ESSENTIAL OILS.

- OL. AMYGD. ESSENT. ANG.
- OL. AMYGD. ESSENT. ANG.
  Sine Acid. Prussic.
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W. J. BUSH & CO.'S SPECIALITY.

ARTILLERY LANE, BISHOPSGATE, LONDON.

# ಹ Marigoldine supplied in

# HAY'S SOLUBLE ESSENCE of JAMAICA GINGER.

### PREPARATION NEW

FINE AND STRONG.

Trade Price, 5s. 6d. per 12 lbs. and upwards, 5s.



Strongly recommended for its exquisite aroma, solubility, great strength, and keeping qualities.

The COMPOUND FORTIFIED ESSENCE

MADE FROM THE ABOVE PREPARATION.

Specially adapted for the Manufacture of the

INEST GINGER ALE.

Trade Price, 6s. per lb.; 12 lbs. and upwards, 5s. 6d.

PREPARED BY

### Chemist, BEYERLEY ROAD, HAY, Manufacturing

LONDON, S.E. YORK STREET, WALWORTH,

ESTABLISHED OVER 40 YEARS.

CITRATE of MAGNESIA, MERCURIALS of every kind, SWEET SPIRITS of NITRE, SAL VOLATILE, B.P. & P.L., PURE VEGETABLE COLOURS of every description, in Sugar and Paste (to this department W. B. & Co. have given special attention, to meet the requirements of the trade);

GLACIAL ACETIC ACID,

CONFECTIONERY FLAVOURS of every kind, and

FRUIT ESSENCES.

SUPER ESSENCE of LEMON only.

MINERAL ACIDS of every kind,

TARTARIC, CITRIC, and other ACIDS (not makers of these, but in a position to offer), BORACIC ACID, &c.

### SOLE PROPRIETORS OF MARIGOLDINE,

NEW COLOUR FOR BUTTER, CHEESE, &c.



UR FOR BUTTER, CHEESE, &c.

After a lengthened investigation, the Proprietors are enabled to offer this novel preparation, representing the rich colour of the Marsh Marigold, in a highly concentrated form. Being a Vegetable Extract, it will be found to impart to Butter a beautiful golden colour, tree from taste, possessing its natural odour, and as pure as the herbage on which the animal feeds.

It is well known that in the Spring or Summer the rich colour of Butter is derivable from the Marsh Marigold and Ranuncull (Buttercups) of our pastures, and it has been the alm of the Proprietors to produce an article that will enable the dairymsn to obtain uniformly the same results at all times of the year in the most agreeable form; and it is confidently believed that it will be found superior to every preparation hitherto sold for the purpose. Its perfect compatibility with oil and greace of every description (not watery compounds) makes it useful for many other purpose in which it is desired to obtain a rich and delicate golden tint.

Sold by Chemists, &c., and Wholesale Houses.

Sold by Chemists, &c., and Wholesale Houses.

W. B. & Co. solicit Inquiries, and will be happy to furnish Samples and Prices at all times.

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AN EMINENTLY RESTORATIVE MINEPAL WATER.

AN EMINENTLY RESTORATIVE MINEPAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (28 millig, of arseniate of soda
Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Ansemia,
Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermitten's
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H.R.H. the Duke of Connaught and the Royal Family



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MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid

Prices and Pamphlet on application. Agents appointed.



AND ALL APPLIANCES

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CATALOGUE - FORWARDED FREE.

Catalogue above reterred to comprises every requirement for the Chemist in the way of Manufacturing and Dispensing of all kinds of Aerated Waters. 3 Gold. 2 Silver and 2 Bronze Medals. International Health Exhibition, London, 1884. SEE PAGES 194, 195, END PAPERS VII



A New really Nutritious and Agreeable Food for Invalids, as well as for all persons in good health.

A solution of the long-sought scientific problem. The nutritious constituents of fresh meat peptonised and retaining the albumen, forming a product of the highest alimentary order, not liable to decompose, agreeable to the taste, invigorating, and instantly assimilable, without requiring the process of digestion. Used with the best results in the Hospitals of London, Paris, Berlin, Vienna. &c. specialty recommended for convale-cents, and for sufferers from dyspepsia, poverty of blood, sudgen faintness. &c. For further details, see The Lancet of September 6th, 1884.

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THE NEW NATURAL MINERAL WATER for the Treatment of DISEASES of the KIDNEYS & BLADDER.

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This natural Lithia Spring, aithough only recently brought before the Medical Profession, has gained a high reputation on account of its quick and

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Dr. Mortimer Granville, M.R.C.P., in his new work, "Gout in its Clinical Aspects," writes:—"Vichy, Vals, and the other best-known waters are all apt to cause flatuiency, while the purging waters are, according to the view I take of gout, distinctly contra-indicated, because they draw fluid away from the kidneys, which it is all-important to flush. The only water I prescribe is the Kronenqueile, etc."

Through all Wholesale Houses and Chemists, or from the

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CAUTION.-Messrs, W. SCHACHT & CO. beg to inform the Trade generally that all cases are labelled "KRONENQUELLE (Registered)," together with their name and address printed in BLUE INK.

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Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery, IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.

CONFECTIONERY WORKS. EBOR

Lozenges of all descriptions made from Customers' private formulæ (or ingredients), and stamped with any name or device.

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MARK, LABEL, AND OTHER COLOURED SIDE

(For the Prevention of Fraud and Refilling of Old Labelled Bottles), as supplied to Bass & Co., and the leading Brewers and Bottlers of Wines and Spirits throughout Europe.

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Manufacturers of Pure English-made Bottling and Package Tinfoil, from 1s. pe lb. and upwards; Mixed Foil (Foreign Quality), from 6d. per lb. (according to gauge); Paten Barrel Packages and Snuff Canisters, &c.

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ESPECIALLY ADAPTED FOR CHEMISTS' COUNTERS.

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Most suitable for making Quinine Wine because of its containing the least percentage of tannic aci possible, and being in the most brilliant condition. In casks of not less 8 gallons, 4s. per gallon, carriag paid. Extra superior quality (finest made), 4s. 6d. per gallon, carriage paid.

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FREDERICKSHALL 25/ Case, 25 bofs. ; 40/ Case, 50 4-bofs.

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Carriage paid. Hampers free.

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HUNYADI JANOS (10 Cases, 3/- and 5/- less), 20/- Case, 20 bts.

SELTZER 11/- Hpr., 25 bts.

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18/- Case, 20 bts. PULLNA ... 18/- Case, 20 bts, ... 30/- Case, 50 j-bts. AICHA" = 31/- H 27/- H 50 bts. 50 ½-bts. CARLSBAD ... - 37/-- 42/6 50 bts. KISSENGEN SCHWALLBACH \_\_ **27/8** HOMBURG WILDUNGEN 43/-CARLSBAD SALTS, 2-Bots, 20/- per doz.
4-Bots, 40/ per doz. Bots, 20/- per doz.

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FROM FINEST LAKES IN CHRISTIANIA.

Professor Frankland's report with analysis
"The Ice is exceedingly pure, and contains I
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Original Blocks (2 to 3 cwt. each) 2s. 0d. per cv cwt. to 2 cwt. ... 2s. 6d. per cv. cwt. to 1 cwt. ... dd. per lb.

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W. B. HARRISON.

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TIME, LABOUR, AND MONEY SAVER.

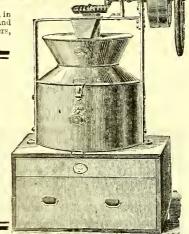
These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the pestle and mortar, supplying a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalters, Colour Merchants, and Manufacturers.



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MEDAL



With best wishes, I am. yours very truly,

TESTIMONIAL.

Dear Sirs.—In replying to your letter of the 5th inst. allow me to say that I have much pleasure in testifying to the efficiency of the "Desideratum" Mixer. Being the inventor of a complicated compound, with which I had no end of trouble in properly and rapidly mixing, I must say I am indebted to your machine very greatly on the score of rapidity of operation. I usually mix about 1 cwt. at a time; the material is heavy and apt to doesn. P. H. Bracher & Co.

Send for Ithustrated Price List and full particulars, Post Free.

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# FRY'S

Pure Concentrated



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Prepared by a new and special scientific process securing extreme solubility, and developing the finest flavour of the Cocoa.

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### DOULTON'S MANGANOUS CARBON FILTERS

(DR. BERNAYS'S PATENT).

ADVANTAGES:

MANGANOUS CARBON possesses very high FILTERING POWER.

Can be readily taken to pieces for cleansing.

NO water can remain in reservoir to become stagnant.

An entire absence of corrodible material.



### DOULTON'S IMPROVED GRANULAR CHARCOAL FILTER.

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The Lower Bed is kept perfectly clean, thus adding to the durability of the Filter.

A DOUBLE ACTION secured to the power of the Filtering Medium.

Any description of Filter Refitted at moderate charge.

Prize Medal, International Health Exhibition, 1884.

DOULTON & CO. also manufacture Bondoir or Table Filters, Pocket and Syphon Filters for Tourists' use, Manganous Carbon Self-acting Cistern Filters, Refrigerator Filters, Main Service Filters for Manufacturing purposes, Hotels, &c. May be had of all Dealers,—DOULTON & CO., Lambeth, London, S.E. DEPOTS-100 SOHO STREET, LIVERPOOL; GRANVILLE STREET, BIRMINGHAM: AND 6 RUE DE PARADIS, PARIS.

CONCENTRATED PATENT

# PEPTONISED MILK

AND

# PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

# SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d. Obtainable Everywhere,



# KREOCHYLE

KREOCHYLE IS A PURE LIQUID MEAT, CONTAINING, IN ADDI-TION TO THE ORDINARY "MEAT EXTRACTIVES," THE WHOLE OF THE SOLUBLE ALBUMEN OF THE MEAT IN A FORM SIICH THAT IT IS ABSOLUTELY SELF-DIGESTIVE.

FOOD AND STIMULANT

BARFF

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FOR INVALIDS
AND INFANTS.

PRICES— Retail, 5 per pint; 2 9 per ½ pint; 16 per ½ pint. HAND-BILLS, SHOW-CARDS, AND SAMPLES SENT WITH

EVERY ORDER IF DESIRED.

LIQUID MEAT.

BY ROYAL LETTERS PATENT.

# BARFF BORO-GLYCERIDE

FOOD PRESERVER.

FOR MEDICAL & SURGICAL PURPOSES.

FOR PARTICULARS CONCERNING KREOCHYLE AND BARFF BORO-GLYCERIDE APPLY TO THE

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TO BE OBTAINED OF ALL WHOLESALE HOUSES.

### CASH PRICE

20s. tor 121 GALLONS.

CASKS FREE.

School of Cookery, Crystal Palace, S.E. January, 1883.

MR. PETER TYRER,
SIR.—I have been nsing the "Borongh"
Ketchnp, and am very pleased with it. Its
flavour is excellent, both for all kinds of
Savonry dishes and Soups; and I most certainly should advise every cook and honsekeeper to nee it, FOR I HAVE NEVER YET MET
ITS EQUAL MARIAN SMITHARD,

Lecturess on Cookery.

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# HARVEY'S SAUCE



This Label is protected by PERPETUAL INJUNCTION in Chancery of the 9th July, 1858, and without it none can be GENUINE.

Prepared only by E. LAZENBY & SON, LONDON.

And sold Retail by Grocers, Otlmen, Italian Warehousemen, &c., throughout the Kingdom.

### SEVEN INJUNCTIONS have been granted during the past few months.

# CAUTION! "YORKSHIRI



NOTICE IS HEREBY GIVEN that in several actions instituted by Messrs. GOODALL, BACKHOUSE & CO., of Leeds, Injunctions have been recently granted by Judges of the Chancery Division of the High Court of Judicature, restraining several persons from using several Counterfeits of Messrs. Goodall, Backhouse & Co.'s Labels, and in particular against the use of the words "YORKSHIRE RELISH." The sole and exclusive right to the use of which words having been finally established by the above Firm, they will take immediate proceedings against parties manufacturing or offering for sale Sauce under the above title, not being of the manufacture of Messrs. Goodall, Backhouse & Co.

Information may be given to the undersigned,

J. SEYMOUR SALAMAN,

12 King Street, Cheapside, London, Solicitor to the Trade Mark Protection Society.

### SPECIAL NOTICE & CAUTION.

BRAND & CO.

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

### NOT REMOVED

From their SOLE ADDRESS, No. 11 LITTLE STANHOPE STEEET, MAY-FAIR, W, and caution the trade to

BEWARE of IMITATIONS.



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# DANDELION

(LEA & PERRINS').

MADE WITH PURE

# DANDELION ROOT & THE FINEST COFFEE.

Sold in Tins, at 8d., 1s. 6d., & 3s. each.

# LIVER TONIC

(GEORGE & WELCH'S).

1s.  $1\frac{1}{2}$ d., 2s. 9d., and 4s. 6d. per Bottle.

# CARBOLINE (TOOTH PASTE)

1s. 6d. per Pot.

Supplied by the Patent Medicine Houses on the usual terms, or the Makers

GEORGE & WELCH, WORCESTER.

MUSTARD.

# FINCH, RICKMAN & CO.'S

Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

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LONDON.

# GEO. MASON & CO.'S

SPECIALITIES FOR

ESSENCE OF INVALIDS.

AS SUPPLIED TO THE LEADING HOSPITALS.

A LIBERAL TRADE ALLOWANCE.
PRICE LIST POST FREE.

417 KING'S ROAD, CHELSEA,

LONDON S.W

EIGHT PRIZE MEDALS AWARDED.

# HOUSEHOLD SPECIALITIES.

# YorkshireRelish

THE MOST DELICIOUS SAUCE IN THE WORLD.

This obeap and excellent Sauce makes the plainest viands malatable, and ithe daintiest dishes nore delicious. To Chope and Steaks, Fish, &c., it is noomparable. Sold hy Grocers, Oilmen, Chemists, &c., in Buttles, 64., 1s., and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate and name Goodars, Backhouse & Co. No other is genuine,

# Goodall's Baking Powder

THE BEST IN THE WORLD.

Makes delicione Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s, Tins.

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The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottlee, is, and 2s, each

# Goodall's Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the ntmost satisfaction if the instructions given are implicitly followed. Sold in Boxee 6d, and 1s. each.

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1s acknowledged by all to be the most convenient and economical preparation ever introduced, as, hy its use, a most Rich and Delicious Blancmange may be produced in a few minutes at a trifling cost, and may he had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d, and 1s, each.

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Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and untritions. One penny packet will go as far as four eggs; and one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tine.

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WHITE HORSE STREET, LEEDS.

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

TELEGRAPHIC ADDRESS-FEW LORIMER & CO., Manufacturing Chemists SPECIALTI "Calisayin, London." and Wholesale Druggists, TELEPHONE Hargrave Park Road. NUMBER LONDON. 7524. AWARDED PURE COD LIVER MEDALS FINEST OIL, QUALITY. CONE, In One Year (1984), 8-07., 8'1 16-02., 14'; 32-02. botts, 24 6 doz. fall., 7; 1-gall. bots., 93 doz.; orlg. cask, 6/6 gall. }-plnt, 7/6; 1-pint, 12/6 doz. In Turned Wood Screw-Top Cases, or Bottles, to retail at /6 and 1/ each, 3/6 and 7/ dozen. LONDON & CALCUTTA.

In accordance with the request of many Chemlete LORIMER'S

LEADING SPECIALTIES will in future be supwithout any plied indication of Retail Prices on Labels, packages, or advertislag matter, so that the Retaller can fix his own price and secure the highest profits attainable. In small towns agents are appointed who have the whole trade of their district with-

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(PURE FLAVOURING), Distilled from Spices, Herbs,

Fruits, &c. For Cullnary Purposes

j-oz. bots. 2/9 doz., to retail at 6d. each. 1-oz. bots. 4/8 doz., to retail at 1/ each.

2.oz. bots., 8/ doz., to retail at 2/ each. 4-02. hote. 11 doz., to retail at 3 each.

In 1 or 1 doz. Fancy Boxes, assorted or otherwise.

I, 2, and 4 oz. may be had with Sprinkling Stoppers at 7d. doz.

# QUININE

**IRON** TONIC.

ORIMER

8 and 16 oz. Bottles, containing 16 and 32 full doses, 5 6 and 15/ doz.

Parrish's Gold Medal CHEMICAL FOOD

1 11b bots. 6,3 10/9 doz. Bulk, Ib., 8d. cwt., 50/.

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As supplied to H.M. overnment.

# LORIMER'S QUININE

Has been examined and approved at Somerset House by the Inland

Revenue Authorities. Wine bottles, 18/ doz. Imperial Piuts, 16/; Imperial Half-pints, 8/4.

rape Juice

# Concentrated

AND

IRON.

Bottles of 40 and 80 doses, 29 and 4/6 cach.

21/ and 42/ doz. bottles.

British Pharm., 1885. CITRATE OF IRON & QUININE I-oz. bots., I/3 Bulk, 1/2 oz.

# LIQUOR FOR

Lb., 4/9.

One part added to ten parts distilled ater produces a permanently britliant Tonie, containing a full 5-grain dosc of the P.B. citrate in each half-ounce.

COMPOUND

### SYRUP OF

### Hypophosphites Slightly Alkaline,

S. Gr. 1.35.

4. ½, 1 lb., 9/6, 16/, 30/ doz. In bulk, 2/ lb. Each teaspoonful

(fluid drachm) contains: Hypophosphites grs.

Lime .... 2 Sodium .... 17 Potassium .. .. 1 Iron .. .. .. Manganese .. Quinine .. .. .. Strychnia .. .. 1-100

Samples free on appli-cation.

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Cascara Sagrada Perfect Castor Oil Transparent Cement

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CITRATE of IRON and QUININE and all Scaled Preparations. CITRATE of MAGNESIA and all Granular Preparations.

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Purest Drugs and Preparations, in all sizes, put up in best style and at prices including Bottles, Boxes, &c., lower than bulk prices of Wholesale Druggists.

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SPECIAL BLENDS OF TEA- No. 1, 1 No. 2, 11 No. 3, 13 No. 4, 1/6 No. 5, 1/9 No. 6, 2/ X, 2 4

Duty-paid parcels in 20-lb. caddies or 56-lb. 1-chests. Ca riage paid on 1-chests. Terms, net cash.

COFFEES (Roasted) - 9d. 10d. 11d. 1 | 11 | 12 | 13 | Mocha, 1/4 | Finest Mysore, 1/5 FINE

In 28-lb., 56-lb, or 112-lb. bags; also supplied raw or ground. Terms cash, less 2\frac{1}{2} per cent. discount.

FRANÇAIS in 1-lb., ½-lb., and 1-lb. Canfsters. THE NEW FRENCH COFFEE CAFE FULL PARTICULARS, PRICE LISTS, SAMPLES, AND ANY INFORMATION ON RECEIPT OF TRADE CARD.

EXPORT DEPARTMENT .- Every variety of Tex or Coffee in bond. Shipped f.o.b. London against banker's credit or remittance. Samples, price current, and every information on application.

### KANGRA VALLEY. Indian Tea Growers' Association, PANTON ST., HAYMARK Late of NEW COVENTRY STREET, W.). HAYMARKET

The distinctive feature of the Business of this Association of Planters is that the Tea is delivered to consumers in the original 1-lb., 1-lb., tinfoil-ined parcels in which it is packed on the plantations.

THERE ARE THREE QUALITIES:

ORANGE PEKOE, PEKOE & PEKOE SOUCHONG, Retailing respectively at 4s., 3s., and 2s. 6d.

They were EXHIBITED and INFUSED in the INDIAN TEA SECTION, HEALTH EXHIBITION, and now at the ALBERT PALACE, BATTERSEA.

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WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, Is. 8-f. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

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INTERMEDIATE TEA, 21. per lb. BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.-AGENTS APPOINTED, where unrepresented, throughout the United Kingdom

Prospectus and Samples Free on Application. Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.
P.O.O. payable at head office. Bankers, the National Provincial Bank of

England.

35

### MAKING NEW THE REVOLVING APPARATUS

(Michaelis' Patent).

For further particulars

See the Chemists' and Druggists' Diary, 1834, page 274, OR APPLY TO

ROTHERMEL. PAUL 105 (late of 27) LEADENHALL ST., LONDON. THE

VIRGINIA BUILDINGS, GLASGOW.

Have for several years supplied Four STANDARD QUALITIES of their PURE TEAS-



PACKED in  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 11b. TINS, Which are very suitable for, and greatly

popular with. Chemists and Druggists, and Fancy Warehousemen. The Home Retail Prices, marked in plain figures on each Tin, are 2/4, 2/10, 3/2, and 3/6 per lb., or in 5 and 10 lb. Tins, 1d. per lb. less.

Terms to Agents may be had on application to A. M. Stewart, Office of The Indian Tea Growers Co., Virginian Buildigs, Glasgow.

IN LEADEN PACKETS.

You have vet to add to your tradeconsiderably. This Tea is grown in the fertile Island of Ceylon. As these Packets are perfectly air-tight, the Tea can be keet in them for a considerable length of time, and yet lose none of its fragrance and aroma. Being mild and invigorating, it is especially suitable for invalids and convalescents. Guaranteed to be absolutely pure, and full weight without the package,

Choice Cevion Pekoe Souchong 28, 6d,
Choicest Cevion Pekoe Souchong 28, 6d,
Choicest Cevion Pekoe 38, 0d,
Superb Small Leaf Orange Pekoe 38, 6d,
Done up in 1-lb, and }-lb. Lead Parkets. To be had in Half Chests (60 or 40 lbs)
and Boxes (20 lbs.).

These Teasare selected from the choicest growth of the earliest pickings from the
best estates in India, Ceylon, and China. 1 6, 1/8, 1/10, 2/, 2/6, and 3/.

TERMS AND TASTING SAMPLES FREE ON APPLICATION.

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LONDON, E.C. Agents Wanted.] [Agents Wanted.

GREASEPROOF WATERPROOF AND

Used by Chemists, Soap Makers, and Confectioners.

It does not adhere, is cheaper than Tin-foil or other substitutes This Tissue is specially prepared free from Taste or SMELL.

PRICES (Special Terms for large quantities).—Half-Sheet Post Free.—Size 20 by 30 inches, 9/3 Ream, 8d. Quire 174 by 30 inches, 8/3 Ream, 7d. Quire; 15 by 30 inches, 7/8 Ream, 6d. Quire; Sample Quire Post free (20 by 30 in.), 11d.

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### F. DARTON & CO.,

Established 7

MAKERS TO H.M.'S GOVERNMENT, 45 ST. JOHN STREET. WEST SMITHFIELD.

1834.

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As specially noticed in the Lancet, Chemist and Druggist, &c., can be obtained only of the Inventors and Makers; cannot get out ot order, and are therefore specially suited for Export.

### PRICES, etc.

4-inch or 6-inch, in Ebony or German Silver Case, 4/ each. Fahrenheit or Centigrade scale, Fig. 1.





Fra 1.

Do., in Sterling Silver case, 6/ each,

Ordinary Pattern, Contracted Stem, in German Silver case, 4-inch, only 3/ each.

DARTON'S IMPROVED LENS FRONT IM-PERISHABLE INDEX CLINICAL THER-MOMETERS, 4-inch or 6-inch (Fig. 2), 7 each; if with contracted stem only, 6/ each.



1 Bent and 1 Straight 6-inch Clinical Thermometer in morocco snap case, 9/ the set.

KEW CERTIFICATES to any of above, 1/3 each extra. Special quotations for large quantities. Sent safely packed by post on receipt of P.O.O.

ENAMELLED TUBE BATH THERMOMETERS in japanned tin case, Silvered Metal Scale (Fig. 3), 15/ per doz.

Do., with Porcelain Scales, 24/ per doz.

LACTOMETERS FOR TESTING MILK, 7/ per doz. Do., Best, with Ivory Scales, Mercury Bulb, 16/ per doz.

All kinds of Meteorological Instruments made and repaired for the Trade.

# DARTON'S SPECIALLY PREPARED

# METAL SPECTACLES.

The advantage of these spectacles for durability is that they will NOT RUST or OXIDISE, and are therefore specially suited for the Export Trade.

No	. 1	Stout ma	de Fra	mes, g	lazed	with	glasses				8/6	doz.
11	2	Superior	Finish	ditto	**	11	71			• •	15/	
23	3	99	9.1	,,	- 11	11	pebbl	ез				
		Eye Prot	ectors,	glazed	with	nentr	al or blu	ie tini	flatgl	asses	21/	10
33	5	99		19	11		,, gl	asses	with s	lghts	28/	99

2,000 GROSS of Eye Protectors for preserving the eyes from the glare of the sun and sand as supplied to H. M.'s Government troops for use in Egypt, at 30/ per gross.

N.B.-Orders cannot be received for less quantities than 1 gross.

New Illustrated Net Price List of Spectacles, Folders, Opera, Marine, and Field Glasses, Telescopes, and Microscopes, &c., post free on application, enclosing trade card.

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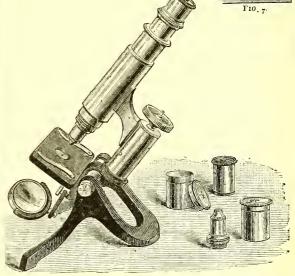
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		SINGLE.	DOUBLE.
IRCULAR	, Full-length Springs, Covered Basil and Chamois, or Moleskin (1st Quality)	21/-	34/-
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Ditto,	Narrow Springs, Covered in Blue or Red Roan or Moleskin (2nd Quality)	24/-	40/-
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Ditto,	Covered in Roan and Moleskin (2nd Quality)	40/-	68/-
SALMON &	ODY'S Expired Patent, Covered in White Roan and Doe (1st Quality)	36/-	72/-
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AWARD OF MERIT, INTERNATIONAL EXHIBITION, 1881,

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CAPACITY.-TWELVE PINTS. Price, including Fittings, 3 6 each. 'Bottles alone, 1 6 each. Any part of the fittings supplied\_separately to replace.

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From Marble, &c.

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BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

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OR PANCREATISED (PREDIGESTED) FAT,

Largely Prescribed as an Article of Diet in all cases of CONSUMPTION, WASTING, LOSS OF APPETITE, STRENGTH, AND DIGESTIVE POWER.

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The Emulsion is of the consistence of Devonshire Cream, easily miscible with fluids, and quite unobjectionable in taste. It may be given in milk or water, and with the addition of a little wine or brandy if

In Bottles, 2s. 6d., 4s. 6d., and 8s.

SAYORY & MOORE, 143 NEW BOND ST., W.



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Post Office Orders to be made payable to EDWARD HALSE, at the General Post Office.

### Titerary Contents,

PAGE	PAGE
Professor Redwood 625	Obituary 661
Corner for Students 626	Editorlal Notes—
Pharmaealia 627	The British Pharmacopania 662
The Pharmacentical Society 628	Dr. Quain ou Medical Progress 663
Pharmaceutical Society of	Pasteur's Treatment of Hydro-
Ireland 629	pirobia 664
Metropolitan Reports 629	Doctors and Chemists in Ho-
Provinclai Reports 629	meropathy 665
Messrs, Stewart's Comb Works 633	Aërated Water Makers and the
Edinburgh Chemists'Assistants'	Excise 665
Association 631	Commercial Travellers 669
Pharmacy in Australia 635	Another Patent Me licine Pro-
French Correspondence 636	ject 633
The Indian Pharmacentical	Reviews and Literary Notes 667
Examinations 637	Trade Notes 669
Aërated Water Machinery Ex-	Comparison of the British and
hibition	International Pharmaco-
The Chemists' Mineral Water	pælas 670
Association 639	Cultivation of Liquorice 671
The late Walter Weldon, F.R S. 640	A Pharmicist's Note-book 673
Veterinary Pharmaey 641	Legal 675
Trade-marks applied for 642	Patents 677
The British Pharmaeopæia 644	Personalties 678
Notes on Novelties 60	Trade Report 679
Gazette 661	Correspondence 684

With this issue we commence the circulation of the advertisements of THE CHEMIST AND DRUGGIST to the whole of the Australasian drug trade. A very considerable increase of influence on the pharmacists of the colonies of the south may therefore be fairly anticipated. This working of THE CHEMIST AND DRUGGIST of London will coincide with the publication of our monthly subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, which will commence on January 1, 1886.

The Foreign Edition of THE CHEMISTS' AND DRUGGISTS' Diary for 1886 has all been sent off, and copies will reach subscribers in the most distant parts of the world before the end of this year. The supply for the Australasian Colonies left by the s.s. Orient on the 11th inst. The copies for subscribers in the United Kingdom will be issued in the course of the present month. The Diaries will be delivered to subscribers by Sutton & Co., and in no case should any charge be made for delivery. But if such a charge should be claimed by any of Sutton's agents, subscribers are requested to pay the same, take a receipt, and send it to us, and we will refund the amount. The literary contents of the Diary will be found very varied, the special treatise this year being on the "Pharmacy of the Pharmacopæia." A telegraphic code and suggestions for druggists' use is also included.

Orders for extra copies should be sent in as early as possible. To subscribers extra copies are supplied at 2s. 6d. each. The price of the Diary to non-subscribers is 3s. 6d. For several years past the supply has been completely exhausted by the beginning of the year.

### PROFESSOR REDWOOD.

THE leaders of pharmacy, rightly interpreting the universal feeling of warm respect and affection which all classes of pharmacists entertain towards Professor Redwood, called a meeting, by advertisement, for the 4th inst. to consider a proposal to memorialise his long services to pharmacy in an appropriate manner. A goodly number of representative men assembled, and the most cordial desire to do honour to the Emeritus Professor was manifested. It was understood from some of Professor Redwood's friends that he would not desire any presentation to himself, and the suggestion of a Redwood Scholarship in Pharmacy was generally approved No record could be more appropriate, and it may be added that none could be more useful. It is a scheme which the Professor's old pupils and his many friends can all support with the heartiest goodwill. At the same time, we believe there will be a general feeling that something more is desirable. We are all human, Dr. Redwood as much as the rest of us; and, besides the endowment of this scholarship, something will be wanted to satisfy the humanity of Dr. Redwood and his friends. The latter will assuredly be disappointed if they cannot somehow meet him face to face, and let him acquire the certain knowledge how widely and how highly he is esteemed among all those who practice the art which he has so long and so efficiently taught. Besides the scholarship, with which it is right to perpetuate his name, it will be a gratification, we believe, to most, if not to all, the subscribers if some more directly personal tribute can be added. The pharmaceutical world will make this possible by cordially responding to the appeal which we understand will shortly be made to them.

Professor Redwood has attained his eightieth year, and, as was evidenced at the last evening meeting of the Pharmaceutical Society, he is now younger than ever. This is not the time to enter on the history of his labours. More than any other man amongst us, he has made British pharmacy what it is to-day. For three score years he has promoted its science, literature, and commerce. All his work has been so painstaking and so thorough, and he has shown such uniform courtesy to all who have come in contact with him, that we believe the proposed memorial of him will be a most general expression of pharmaceutical respect. Some eminent chemists and medical men have signified their wish to take part in the testimonial, and their co-operation will make it all the more honourable. The committee appointed to carry out the arrangements is a small but energetic one. It consists of Mr. Carteighe, chairman, Mr. John Williams, honorary treasurer, and Professor Dunstan, honorary secretary.

We have received the following from the General Mcdical Council Office, 299 Oxford Street, London, W.:—"The Registrar of the Medical Council begs to inform the Editor of THE CHEMIST AND DRUGGIST that a slip containing some corrections which are requisite in the new edition of the British Pharmacopæia may be obtained, by those who do not already possess it, by application to this office, or to Messrs. Spottiswoode & Co.





CONDUCTED BY RICHARD J. Moss, F.C.S.

### QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of salts. It is to be submitted to a thorough systematic examination, designed to detect all the constituents of the mixture, and to show that no other substances are present. In reporting, each student is to give a brief account of the work done, and to furnish a list of the metals and acid radicles detected, distinguishing those which may be regarded as accidental impurities.

Applications for portions of the mixture should be sent in not later than the 20th inst. The samples will be forwarded on the 25th.

Students' reports will be received up to December 15.

### REPORTS.

The mixture of salts sent to applicants for analysis last month consisted of:—

		1	arts
Level n' rate	 		12
Bismut mitrate			13
Str nti ma chloride			19
Potassium l'it atrate		 	30
Amun aloni chlori le	 	 	3

The proportion of the several metallie and acid radicles in this mixture is shown in the following table:—

Pb				1 0	 5
Bi				1111	 6
				7:)	 5
				830	 3
				1 35	 12
474		 	 	9 04	 1
N. 1'		 	 	13 13	 4
H(C,	$\Pi_{+} \rightarrow$	 	 	31.70	 6
11 )		 	 	1201	 -
				100 00	

In a separate column will be found opposite each constituent the numb r of students who failed to detect it. A good many concluded that the organic compound was a citrate instead of a tartrate. The two classes of salts present many close analogies, but the production of a precipitate of calcium tartrate without boiling, and the behaviour of an ammoniacal solution of this precipitate with silver nitrate, afford means of readily distinguishing the salts.

The detection of ammonia proved a serious difficulty to a considerable number of students. There are few substances so easily separated and recognised as ammonia, chiefly on account of its volatility. The plan commonly recommended in text-books is to warm the suspected substance with a solution of sodium or potassium hydrate and endeavour to asecrtain whether ammonia is evolved. This does very well in dealing with a body rich in ammonia, but in the ease of 1 or 2 per cent, the method is not satisfactory, except in experieneed hands. A plan that gave satisfactory results in the present ease was as follows: About one-tenth of a grain of the mixture was placed in a watch-glass and mixed with about three times its bulk of solid ealcium hydrate, and then very slightly moistened with water. The watch-glass was then eovered with a glass plate, to the underside of which a small serap of slightly moistened turmerie-paper adhered. In one minute the turmerie-paper had changed colour, in five minutes it was quite brown. Removing the cover the smell of ammonia was distinctly perceptible. Now the quantity of ammonia dealt with in this way was about 0.001 grain. Further tests might readily have been applied if thought desirable. The fresher the ealeium hydrate the better, but it will do if it gives a strong alkaline reaction. The small quantity of the original mixture employed need not be lost, as the residue from the ammonia test may be used to test for nitric acid, by adding five or six drops of water and filtering through a very small filter. The filtrate is then acidulated with sulphuric acid, and the ferrous sulphate test applied.

### PRIZES.

The First Prize for the best analysis has been awarded to John Davy Turney, 183 Union Street, Plymouth.

The Second Prize has been awarded to

Thomas J. English, 9 Duggan Place, Rathmines, Dublin.

### Marks Awarded for Analyses.

	. D. Turney (first								75
"	7. J. English (secon	id prize	)	93	" Prospect"				75
1	ewis Ough			90	E. F. Miller				70
1	Alfred Latchmore			90	C. B. Gilson				60
4.0	Ni desperandum			87	" Polarised Ray	"			55
64	Xema"			82	F. W. K				50
6.6				80	G. M. B.	٠.			45
"J	. В,			80	"Corrigenda" "Yah"		• •		33
T-	. Calder				T A . 42.	٠.	* 1		
1		**		10	J. Mustin	• •	* *	٠.	30

### TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken us a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

O All communications should include the names and addresses of the writers.

Nil Daparandum.—You employ abbreviations for the names of metals which have the disadvantage of not being as intelligible as the proper symbols, while they are sometimes inelegant; Nic, for example, is no improvement on Ni for nickel.

L-tiklaw.—The black precipitate obtained with aumonium sulphide was clearly due to lead, and points to the incomplete separation of that metal by sulphuretted hydrogen. The precipitate attributed to manganese required further examination. The minutest quantity of a manganese compound will give a sodium carbonate lead a green tint.

J. B. It is highly probable that in testing for chlorine you omitted to add a sufficient quantity of nitric acid, and thus the chloride was thrown down mixed with tartrate of silver.

E. J. M.—You ought to have had little difficulty in detecting to large a quantity of lead. You did not try the malleability of the beads.

E. F. M.—More than 12 per cent, of the nitric radicle is a large quantity to overlook. The reaction with ferrous sulphate and sulphuric acid was obtained without any difficulty.

C. B. Gilson. There is a marked difference in the odour produced by the ignition of a tarrate and of a citrate. You do not say that calcium chloride failed to give a precipitate before boiling.

Polarised Ray.—The solution in which you failed to detect any of the metals of the calcium group must have been excessively dilute. After adding ammonium carbonate the solution should always be warmed. A great excess of ammonium chloride is to be avoided, as the carbonates are more or less soluble in a solution of this salt.

F. W. K.—In testing for lead with sulphuric acid in the presence of nitric acid, you cannot be sure that there is no precipitate, unless the solution is evaporated as far as possible to dryness and water then added.

G. M. B.—You have taken a good deal of trouble with the work, but you require a more practical acquaintance with the reactions. If you make mixtures of salts for yourself and examine them, you will find the information gained will repay you well. The method you adopt will do very well, but do not follow an analytical chart without understanding the reasons for every step. The question you ask about the precipitation of magnesia would be best answered by an experiment. Mind that you have a distinct excess of ammonia. The phosphate and arseniate are very similar in their properties.

Corrigenda.—You say that there was not enough of the ammonium carbonate precipitate to try the flame reaction. A mere trace of a stroutium compound gives an intensely red colour to the flame. A platinum wire rubbed on the original powder gave the colour distinctly, although ne adhering particles were visible. Fah.—Your preliminary examination was very incomplete. You ought to have tried the effect of heat on the mixture, and whether any metallic beads could be obtained by reduction before the blow-pipe flame.

J. Austin. You reported the detection of organic matter, but you omitted to state the form in which it existed in the mixture. Your report would be more agreeable reading if it were written with greater care on larger paper, foolscap size is very convenient.

### Pharmacalia.

### TESTIMONIAL TO PROFESSOR REDWOOD.

CIRCUMSTANCES which can never recur in British pharmacy made Emeritus Professor Redwood a representative man. Foreign schools, notably those of France and Germany, offered to students who had neither embraced the medical profession nor yet were pure chemists courses which were at once official and distinct, in which pharmacy as a branch and special department of medicine might be studied. No one need be reminded that, dating back for many years, the pharmacien abroad was a legally-qualified individual. The English pharmacist was not, chiefly because, as a nation, we are not governmental in our ideas, and we have been taught from infancy to learn and labour truly to get our own living in the way which might seem best.

When a doubt arose as to whether we were on the right track, and a certainty was present that our continental neighbours were before us in the race, many an intelligent chemist and druggist recognised his own deficiencies, and was not content to practise his calling solely by the traditions of the shop, or by the guidance of mechanical observation. Pharmacists turned where they could for instruction, and at that time had no other resource than to attend a class of materia medica or therapeutics at some well-known hospital.

We worked for years beside a senior assistant who was one of a large number who went through this process. Therefore, let the young reader mark, that this is statement of fact, not a fancy sketch. "I learnt almost nothing," said our companion, who at this moment is a successful man, "because the lectures were so essentially medical in treatment and in bearing that, to myself, a working pharmacist, they were almost useless."

Then it was that Professor Redwood entered upon his career, and established a new thing—a course of practical and theoretical pharmacy addressed to pharmacists—framed to meet their requirements and to satisfy their wants. The result is in evidence of the manner in which the duty was discharged.

Whatever public recognition may be made of services rendered for five and forty years, the truest testimonial Professor Redwood can receive, and the mark of honour which must please him most, will be the reflection that there are now hundreds of chemists and druggists scattered throughout Great Britain, in far colonies, and in foreign eities, who by his means are pursuing pharmacy with equal ability and honour. Some of his students have reached distinction, and made themselves a name. About these we are silent; for we would rather point to the general rise of our vocation, and to those who "in quiet nooks and corners" are adorning a position which at one time was very poorly esteemed.

Fully aware of the position our Emeritus Professor has occupied in other fields of science—of his long and honourable connection with the Chemical Society, of his share in the direction of official pharmacy, as well as in the literature of his subject, we would not on these rest his claim to grateful remembrance. We have never wanted amongst us

skilled chemists or writers of authority. Less than half a contury ago British pharmacy was in a condition few of our young men can realise. They see round them museums, libraries, and appliances for improvement specially designed for their advancement. Pharmacy as such has become an object of ambition stimulated rather than repressed by examination failures. They see daily, men eminent in the medical profession consulting the chemist as a friend—that chemist with whom fifty years back there was the most distant intercourse.

Part of the change is due to the spirit of the age, part to the higher personal education of the pharmacist. He has become a better man all round—a fact which the outside world is not slow to appreciate. Without prejudice to other agencies which have been at work, let us not forget that Professor Redwood inaugurated the new system, and that under exceptional circumstances he paved the way in which others, led by his influence, have so successfully trod.

### DR. SQUIBB ON ATROPINE.

Dr. Squibb is of opinion that the preparations of belladonna are better than those of atropine salts for therapeutic purposes; but for hypodermic use, and in ophthalmic cases, the solutions of the salts of atropine are indispensable. Sulphate of atropine he considers is used in too large quantities. So much is applied as to render the patient uncomfortable and prolong the dilation unreasonably. When, therefore, it is desired to countcract the dilation by the use of eserine, so strong a solution is required as to render this often painful A skilful ophthalmist states that he now uses a solution of sulphate of atropine of  $\frac{1}{2}$  grain to the fluid ounce much more commonly than a 2-grain solution, with a most satisfactory result.

### A STRANGE COINCIDENCE.

The hidden spring which moves our thoughts, and which by so doing determines action, is inexplicable. Certainly, thought and action are recurrent. There is that strange story about the son engaged in the very act of murdering his own father. When the crime had nearly been completed, and the unnatural offspring was dragging his victim down a path, the old man looked up and said, "Let me lie down here; I did not drag my father beyond that tree." What law of thought led to the exact repetition of the same crime?

A similar illustration is furnished by the death of Dr. Edward Canton, whose body was found on Hampstead Heath. Sarah Wake, housekeeper, deposes that the doctor had been strange in his manner. On one occasion she found a bottle (produced at the inquest) labelled poison, nearly full, in his coat-pocket after he had gone to bed. On Friday he went out, bidding her good-by, and never returned. Another witness states that on Friday evening, accompanied by a friend, he was walking across the Upper Heath, when he noticed a man lying full length on a seat. Thinking he was asleep they did not disturb him, but returning soon afterwards and finding him in the same position, they shook him, and noticed a small glass on the seat, such as chemists use. A constable and a doctor were then summoned. Money was found upon the deceased. There was also a bottle which had contained prussic acid, and the post-mortem examination showed unmistakable signs of that poison. That is the record. The coroner remarked on a peculiar coincidence in connection with the case—that in 1856 John Sadleir, M.P., committed suicide at the same spot by taking prussic acid, and that Dr. Canton was the medical witness in that case. Was it coincidence, or a deed influenced by the law of recurrent thought?

### THE CHOLERA IN ITALY.

The following account is placed on record as historical reference. Were the statements woven into a work of fiction they would be condemned as sensational and unworthy of credence. The extract is taken from the *Standard* of September 21, and relates the condition of things in the nineteenth century at Palermo, on Sunday, the preceding day:—

There is a continued increase in cholern in Palermo. From midnight Friday to 4 A.M. yesterd by there were 300 cases, about half of them fatal. There is a great want of remedies. The population are tumultuous, and a policeman has been wounded, so that the troops had to be called out. The aspect of the city is saddening.

Under this disastrous aspect of affairs, the King announces his intention to repair to the sad scene, hoping in some way to inspire confidence; not, surely, before it was time, for we learn from a telegram published at Rome how grave was the situation: - "Armed citizens prevent the doctors and public functionaries from giving assistance to cholera patients, under the delusion that they will poison them. This belief is inveterate in the people. Sanguinary conflicts have taken place already between the people and the police, causing several deaths, while many were wounded." "Groups of armed men watch in the streets at night, and fire upon those whom they suspect to be spreaders of the cholerapoison. A member of the White Cross Society, on an errand of merey, was twice fired at, but happily escaped. l'anic and disorder are equally great in other parts of the island which have hitherto been uninfected. At Messina the railway has been torn up to prevent the approach of trains from Palermo; and at Trapani, the railway station has been

Comment is nunecessary; yet in this case the repetition of the old phrase may be excused—truth is stranger than tiction.

### The Pharmaceutical Society.

THE Council met on November 4. The members absent were Messrs, Butt and Schacht.

### THE LATE MR. ALEXANDER NAPIER.

The President spoke of the loss sustained, especially in the North, by the recent death, at a comparatively early age, of Mr. Alexander Napier, of Edinburgh. He had for many years taken an active part in the affairs of the Society and of pharmacy generally, and was a most loveable man. These observations were endorsed by Mr. Young.

### THE BENEVOLENT FUND.

An unusually long list of grants was recommended by the Committee and adopted by the Council. Six grants of 10% each, four of 5% each, and one of 10% towards the election of an orphan son of a chemist to an asylum were included. The following were the cases relieved:—

10l. to the widow (aged 56) of a member. Applicant had

a similar grant in February, 1883. (Middlesex.)

10l. to a former member (aged 71) and subscriber to the Fund. Suffering from heart disease and unable to do anything. Applicant has had relief on three occasions previously. (Warwickshire.)

5l. to a former associate and member (aged 65), only earning a small sum as assistant letter-earrier. (Northumberland.)

10l. to the widow (aged 52) of a registered chemist and druggist; has four children, who are hardly earning anything. (Hunts.)

101. to the widow (aged 46) of a registered chemist and

druggist, with two young children. (Middlesex.)

101. 10s. to be placed in the hands of the secretary to assist in getting the orphan son of a registered chemist and druggist into an asylum. There are five children, of whom two have a ready been provided for in a similar way. (Bucks.)

5l. to the widow (aged 42) of a registered chemist and druggist. Applicant has had a previous grant of like amount.

10th to the widow (aged 58) of a registered chemist and druggist, who is endeavouring to support herself by keeping

a school. (Wilts.)

10l. to the widow (aged 58) of a registered chemist and druggist, in business for twenty-six years. (Warwickshire.)

5*l.* to a registered chemist and druggist (aged 43) who had been in business for some years, but is now out of employment. (Gloucester.)

5l. to a registered chemist and druggist (aged 38). Has been in business a few years, but is obliged to give it up from ill-health. (Lanes.)

### REVISION OF THE BY-LAWS.

The Council went into committee to consider the report of this Committee, which had been instructed to prepare and forward to the Privy Council a reply to the communication recently received from that body.

The letter which had been sent was read, and on resuming the report of the Committee was received and adopted on the

motion of the l'resident.

### DONATIONS TO THE MUSEUM.

The following specimens have been presented:—Dried root and powdered root of Rheum officinale, of four years' growth, from Messrs. II. M. & R. Usher, Banbury; twenty-five specimens of Thibetan drugs, from the Director, Royal Gardens, Kew; East Indian, Macassar, and West Indian sandal woods, and of the oils derived from them, from Messrs. Schimmel & Co., Leipzig; roots of Allium victoriale and Asphodelus ramosus, from Mr. J. Kunz; single camomile flowers, from Mr. H. Trembath; root of Hedychium coronarium, from Mr. G. B. Francis; a fresh squill-root from Algeria, from Messrs. T. Christy & Co.; sulphocarbolate of zinc, from Messrs. Hopkin & Williams.

### THE LABORATORY FOR PHARMACEUTICAL RESEARCH.

The Library and Museum Committee had again considered the resolution of the Council of August 8 with regard to research in pharmacy, and, after discussion, the further consideration of the subject had been adjourned. The resolution of the Council of October 7 with reference to a course of instruction in practical or operative pharmacy had also been considered and adjourned.

### PROSECUTIONS UNDER THE PHARMACY ACT.

The report of the General Purposes Committee included the usual letter from the solicitor, reporting the progress made with cases placed in his hands.

J. C. Palmer, Diss, who had been proceeded against for selling poison, and also for using the title "pharmaceutical chemist" illegally, had paid 101. 5%, being two penalties and nominal costs.

Walter Fletcher, Skelmersdale, who had previously paid three penalties, had now paid four additional penalties and court costs, amounting to 22*l*. 4*s*. 6*d*.

Several fresh cases of alleged infringement of the law had been considered by the Committee, and in the majority prosecutions were recommended.

### APPLICATION FOR A GRANT OF 501.

for the purchase of books had been received from the Counci of the North of England Pharmaceutical Association, which had been established for the purpose of founding a school a Newcastle, which would draw scholars from the whol Northern district. The Association had secured premises, library, and book-cases, and consisted of seventy-on members and fifty-one associates, subscribing 10s. 6d. and 5 per annum respectively. Students were coming forward, an the grant was needed principally for the purchase of moder text-books. The application was referred to the Librar Committee.

### THE EXAMINATIONS.

The report of the October examinations showed the following results:—

# Pharmaceutical Society of Freland.

THE monthly meeting of the Council was held on the 4th inst., the President (Mr. J. E. Brunker, M.A.) in the chair.

Letters were read in reference to certain prosecutions for illegal dispensing in Derry, and a resolution was passed thereon.

A letter was read from Mr. J. J. Walsh, asking the Council to accept two certificates of the Intermediate Education Board in lieu of the Preliminary examination of the Society.

As these certificates more than covered the ground of the examination the registrar was directed to intimate that they

would be accepted.

The following examiners were elected unanimously:
H. C. Tweedy, M.D., F.R.C.S.L., in Latin, English, Arithmetic, and the Rudiments of Chemistry and Botany; Wm. Whitla, M.D., in Materia Medica and Botany; Harry Carter Draper, F.C.S., in Pharmacy and General Chemistry.

Mr. Thomas James English (Rathmines), Mr. George Lane, Mr. Cormaek (Monkstown), and Mr. Robert T. Herron

(Armagh) were elected members of the Society.

The PRESIDENT stated that he had issued summonses for an evening meeting, to be held on that day week, for the discussion of pharmaceutical subjects. He trusted that this effort to resume meetings which had been found so useful elsewhere would be attended with success.

Some financial business was disposed of, after which the

Conneil adjourned.

### Metropolitan Reports.

PHARMACEUTICAL FOOTBALL CLUB.

THE following are the matches played by the above club up to the present date:-

October 10.—Pharmaceuticals r. Blackheath Mutuals, at Blackheath. This resulted in a draw, the teams being fairly well matched.

October 17.—Pharmaceuticals r. Ferme Park Rovers, at llornsey. This resulted in another draw, slightly in favour of the Ferme Park, owing to their superior passing, but in the "scrums" the 'Ceuticals were well able to hold their own. While at half back Tupholme played remarkably well.

October 24.—Pharmaceuticals v. Enfield Unity, at Enfield Lock. This resulted in a draw. The Ceuticals, though only playing ten men against thirteen, through their superior play pressed their opponents throughout the game, Dudley Jones

being especially noticeable at three-quarter back.

October 31.—Pharmaceuticals v. St. Augustin's Rangers, at Kilburn. Here the "Pharms," were two men less than their opponents, but Jones secured a "try" for them in the first five minutes, but was disputed, and, there being no umpire, it was given up. In the last two minutes the Rangers obtained

a goal, thus winning by one goal to nil.

November 7.—Pharmacenticals r. Brondesbury, at Kilburn. The 'Ceuticals innstered a strong team, amongst whom we were glad to see Prondman again. During the first half the game was fairly even, the 'Centicals playing up hill, but generally getting the best of the "scrims." Playing down the hill, the "Pharms." pressed their opponents till the end, and it was only by the fine drop kicking of the Brondesbury captain that he averted a signal defeat. For the "Pharms." Proudman and Dudley Jones were most noticeable, but there was not much to

choose, for every man did his level best, and, if they keep on the club will have a great future.

In sending us the foregoing somewhat technical report, Mr.

Herbert W. Perks, the captain, writes:-

"May I also, through your valuable paper, state the Pharmaceutical Football Club is not confined only to students at the Square, but is open to everyone in the trade. And I trust that many assistants in London will come forward and help us to raise the club to a substantial standing, not only for the sake of playing football, but to bring about a feeling of goodfellowship which will be useful to them through life. Assistants are earnestly urged to write to the captain or secretary, 17 Bloomsbury Square."

THE CHEMISTS' ASSISTANTS' ASSOCIATION intend holding their annual conversazione at St. James's Hall, on Wednesday next, November 18, Regent Street entrance. An attractive programme has been drawn up, and, following the precedent of last year, it has been decided to conclude with a dance. The Council have issued invitations to all members of the Association, and also to a number of leading pharmacists and their ladies.

# Probincial Reports.

### BIRMINGHAM.

Notes written for THE CHEMIST AND DRUGGIST.

After a spirited contest, Mr. Thomas Barclay, President of the Midland Counties Chemists' Association, was elected to be one of the Councillors representing the important ward of St. Thomas, on November 3. The election was fought ont on political grounds, the whole machinery of the "Caucus" being brought into play for Mr. Barclay; and the Conservative leaders of the town, with their "Dames to the rescue," were used by his opponent, who had previously represented the ward.

Mr. Charles L. M. Flewitt, chemist, &c., High Street, Bull Ring, celebrated on November 6 the fiftieth anniversary of his nunptials, his "golden wedding," both he and his good wife being in excellent health. Mr. Flewitt is, we believe, the oldest ratepayer in High Street, and, if not actually in years, is in standing the "oldest inhabitant" of his neighbourhood.

An extraordinary "lost and found" lately befell a chemist who resides within a hundred miles of Birmingham. He had occasion to go into a refreshment-room, and whilst waiting there took from his pocket some handbills, letters, bills, &c; part being of no further use were thrown heedlessly on the floor. The same evening, at counting up time, his memory was reminded of a certain 5l. Bank of England note, which when sought could not be found. Thinking it might have been accidentally thrown away, the chemist went again to the refreshment-room, and, on carefully examining the fragmentary and littered papers lying about the floor, he had the pleasurable satisfaction of finding the crumpled "lost" bank note.

On the evening of October 28, at a meeting of the Midland Counties Chemists' Association, held at the Grand Hotel. Mr. G. E. Perry, vice-president, in the chair, a paper was read by Mr. A. E. Robinson, F.C.S., on the British Pharmacopœia of 1885. Between forty and fifty members were present, including two ladies. Mr. Barclay and Mr. Wyley sent letters of apology for their unavoidable absence. The lecturer practically discussed the leading points of difference between the present and past official Pharmacopœias, and gave his own opinion of the several additions and alterations in a humorous manner, causing frequent laughter. You will probably print the paper.

After twenty-five years in business at 202 Broad Street, Birmingham, Mr. Thomas R. Wagstaff has disposed of his establishment to Mr. H. Hutton, from Corbyn, Stacey & Co., London. Mr. Wagstaff retires to Matlock.

Mr. A. Scott has opened a warehouse for druggists' surdries and specialties at 39 Frederick Street, Birmingham.

The businesses of the late Mr. Joshua Harper, Phillip Street and Astou New Town, Aston, have been purchased by Mr. Martin Magor, who has lately returned from India.

It is a regret to record the death of Mrs. Mantell, who for over thirty years had assisted her esteemed husband in the management of the trade of a retail chemist. Her pleasant way of attending to small customers, her unfailing kinduess, and her practical and useful help whenever it was needful will cause a wide circle to lament her loss. It your issue for February last mention was made of Mr. Mantell's retirement into private life.

The death, on October 25, is also announced of Louisa Helen, wife of Mr. William Aldridge, chemist, at 103 Summer Lane, which resulted from bronchitis after a few

days' illness.

To many chemists of Birmingham and snburbs the name of Fred Jackson, tooth-brish manufacturer, late of 69 Moseley Street, will cause a smile. His witty remarks, his eccentric way of doing business (especially his manipulation when explaining how tightly the bristles were fixed), his general get-up, his "small boy" earrying samples from which you could purchase "for eash" now, or in six months, and his many quaint manuerisms will not soon be forgotten by those who had transactions with him. After a few weeks' terrible illness, dropsy supervened, terminating fatally on October 17.

Birmingham is to have another monster establishment. A well-known firm in the metropolis are in treaty for a large plot of ground near the centre of the town, whereon to build an immense store. Considerable progress has been made in the negotiations, and a public announcement will shortly be

made.

A destructive fire broke out on the premises of Mr. Timothy White, wholesale chemist, Queen Street, on the evening of October 19. A sound like an explosion was heard, and in ten minutes the entire building was in flames, which spread with alarming rapidity to houses on both sides. Engines were quickly summoned, and the military were called out, but the crowds in the street considerably retarded operations. Great difficulty was experienced in rescuing the children. Immense quantities of oils and chemicals were consumed, and the building was gutted. The damage will amount to several thousand pounds.

The next meeting of the Midland Chemists' Association will be on November 25, when Mr. John Barelay will read a paper, entitled "A few Notes on French Pharmacy"; and on Wednesday, December 16, a paper on "The Hygiene of the Mouth and Teeth" will be read by W. T. Elliott, L.D.S. Ed. and Dub., F.C.S., Professor of Dental Mechanics, Queen's College, Birmingham. In January Mr. Alcock will deal with "Ipecaeuanha," and in February "The Identification of Starch

Grains" will be treated by Mr. H. W. Jones.

### BRISTOL.

The business at West Park Corner, Clifton, hitherto carried on as a branch by Mr. Robert Keevill, pharmaceutical chemist, has been removed to new premises in Oakfield Road, Clifton, and has been transferred to Mr. F. Dixon Bramald, chemist. The new shop is of novel design in some respects. In place of the usual woodwork and paint, glazed terra-cotta tiles are used, the name, &e., all being worked in them. Running along the top of the ordinary windows is a row of stained eathedral glass tablets, which give a pleasing effect from the inside by day and the outside by night.

### BELFAST.

IRISH CHEMISTS are likely to have a representative in the new Parliament, as Mr. J. Haslitt, of the firm of J. & J. Haslitt, chemists and druggists, North Street, Belfast, has been chosen by the Conservatives of the Western Division of Belfast as their candidate.

### BLACKPOOL.

MR. JACKSON, whose shop was wreeked and the stock destroyed a few months since, has had the whole of his fixtures handsomely renewed. Messrs. Evans, Sons & Co., of Liverpool, undertook the whole work, including renewal of stock and fixtures, and completed it within three weeks from the date of the order.

### OLDHAM.

OLDHAM CHEMISTS' ASSISTANTS' AND APPRENTICES ASSOCIATION.—On October 15 Mr. Albert Smith read an iustructive paper before this Association on "The Chemistry of Bread and Butter." After describing the close ehemical relation existing between the food caten and the tissues which it is designed to build up, the lecturer described the use of the starch, sugar, and oleaginous substances as heat-giving portions of the food, and illustrated the many varieties of the former substance by the aid of two powerful microscopes. A vote of thanks was passed to the lecturer.

### RETFORD.

### CONTRADICTORY ANALYSES.

The Town Council of this town are in scientific straights about their town pump. The Sanitary Committee, believing the water from that source to be unwholesome, had a sample analysed by Messrs. Southall Brothers & Barelay, Birminglam. They reported their results as follows:—

Solid matter at 212° Fahr	 Grains per Gall, 57.0
Chlorine as chlorides	 4.9
Free ammonia very mlnute trace	
Albuminoid ammonia	 0.0098
Nitrites - traces	
Nitrates—small traces	

The quantity of solid matter and chlorides is much higher than is usually to be met with in ordinary water used for drinking purposes.

The albuminoid ammonia is also high, and there are traces of nitrites as well as nitrates present. We are therefore of opinion that this water is not suitable for drinking purposes.

Consequently the pump was doomed. But hereupon arose a number of champions of the pump, who drew up quite a pathetic memorial to the Council in its favour, in which they declared that "they infinitely prefer" its water to that supplied by the waterworks of the town, and they sent a sample of the maligned fluid to Professor Attfield, who gave it the following character:

I find it to be free from contaminating quantities of animal or vegetable matter, and, so far, of good quality for drinking purposes. But it contains a rather large proportion of mineral matter, and is excessively hard. It cannot, in my opinion, fairly be classed among the best varieties of drinking-water, but it is certainly not what can be called a bad water.

The analytical data are appended.

Hard

Joun Attribud.

### ANALYTICAL DATA.

One galloa contains the following number of grains and decimal parts of a grain of the respective substances:—

Total solid matter, dried at	212°	Fahr.			49.
Ammoniaeal matter, yield	ling	10 per	eent.	of	
uitrogea					9.01
(Equal to ammonia per	1,000	0,000, ne	arly C	r07)	
Nitrites					none
Nitrates, containing 17 per	eent	of nitro	gea		0.2
(Equal to grains of n	itrog	en per g	gall., (	03)	
Chlorides, containing 60 per	r cen	t, of chl	orine		8.7
(Equal to grains of el	ılori	ne per g	all., 5	·3.)	
laess reckoned as chalk grains	or d	legrees :			
Removed by conllition					16.
Unaffected by chullition					14.
Total hardness					30.
Lead or copper					none
-				Joi	in Attri

Annexed to the report was a note as follows:—"With compliments. A well of this kind ought not to be closed,—J. A."

The Council were somewhat confused at this array of figures, and they were not much assisted by one of their body who had read in Dr. Parkes' Manual that drinkingwater ought not to contain more than  $1\frac{1}{2}$  grain of organic matter per gallon, and this, he said, contained 57 grains. Sentence on the pump is deferred for the present.

### SHEFFIELD AND DISTRICT.

(Special Correspondence.)

NOTWITHSTANDING the demands upon the managers of the daily press during the electoral eampaign, a local paper found time and space to quote largely from your last month's article on carbolic acid poisoning. In commenting on the same, amazement was expressed "at the supineness of the medical department of the Privy Conneil on the question," yet could not think there was much general ignorance that carbolic acid is a poison. At least there could be no excuse for such ignorance if it existed, because so many cases of death had been reported that they ought to act as a warning to the people to exercise more care where the bottles containing it were placed. The writer attributed all the recent cases reported to be the results of mistakes by the acid being placed in the immediate vicinity of medicines or spirit-bottles, which unfortunately showed that this result had not been attained, but refused to believe that the people who made them did not know that carbolic acid is poisonous.

A Sheffield chemist was summoned before the magistrates on October 15 for keeping a carriage without a licence. The Excise prosecuted, and defendant, who did not appear, was fined 40s. and 8s. costs.

Within the last eighteen months no less than six chemists' businesses have been sold within an area of half a mile. In four cases the effects were disposed of under the auctioneer's hammer, and in the others the fittings and stock were sold by private contract. During the same period not a single new business has been opened.

An inquest has been held at Doneaster to inquire into the distressing circumstances attending the death of Mr. Charles Crowther, chemist, Tiekhill. The evidence showed that deceased had succeeded to his father's business about four years ago, and had since led an intemperate life, sometimes drinking for weeks together. On the night preceding his death he procured 2 drachms of chloral hydrate dissolved in water from Messrs. Dunhill & Stiles, Doncaster. He engaged a bed at the Wood Street Hotel in the same town, and, after having a glass of beer, went to bed at 9 o'clock, leaving instructions to be called at 8 o'clock the following morning, as he wanted to go to Lickhill. Next morning at the time mentioned the landlord, not being able to make him hear, looked through the window, and saw he was lying on the bed as if dead. He summoned the police, who burst the door open and found Crowther dead. Between the bed and mattress was an empty bottle, which smelled as having contained chloral, and on the dressing-table was another bottle of solution of chloral hydrate. Mr. Crowther was in cumbarrassed circumstances, some of his effects being advertised for sale for the benefit of his creditors, and on his person were found several writs. His brother, a chemist at Conisboro', stated that deceased had been in the habit of taking chloral, and that he had warned him against doing so. The medical evidence showed that poison was the cause of death, and the coroner told the jury that the only point they had to decide was whether it was taken intentionally to destroy life or with the object of only producing sleep. A verdict was returned "that the overdose was taken inadvertently, and that when taken the object was to procure sleep." Mr. Crowther was the representative of an oldestablished name and firm of druggists at Tickhill. He was thirty-six years of age, and leaves a widow and two

The business established by Mr. Jno. Hill in West Street, and lately carried on by Mr. Otley, has been purchased by Mr. Morrison, formerly apprentice with Mr. Otley. Mr. Morrison is a pharmacentical chemist, and makes the ninth pharmaceutical chemist in business in the town.

Mr. Thomas Dykes is a very old chemist, and is well known in various parts of the country. When in any fresh town, acting in such capacity as he is able, he generally calls upon some subscriber to have a look at your valuable journal. If he has not already seen an advertisement in the Sheffield papers that by applying at 6 Hartington Street, Derby, he will hear of something to his advantage, perhaps some of your readers may be able to give him the information.

Some months ago two Sheffield chemists were carrying on by advertisement a newspaper warfare respecting the ownership of recipes. A business had been sold by the trustee in bankruptey, and the undischarged bankrupt, obtaining assistance, commenced business in another part of the town hence the dispute. Statements and counter statements

were made. Affidavits pro and con were made by accountants, and altogether not a particularly interesting or edifying spectacle was witnessed by outsiders. Lately I heard of another dispute, which at one time threatened to become public, but by the intervention of friends the lawyers have been dispensed with. A well-known firm of homeopathic chemists some time ago purchased a business in this town. and there was a reservation in the contract of sale regarding a certain syrup put up by the vendor. The purchasers were aggrieved on discovering that the preparation in question was being supplied to other chemists besides themselves, and, looking upon this to be a violation of the agreement, had lawyer's letters sent to all involved warning them of an infringement of their rights. The matter has been amicably settled by arbitration, the late proprietor of the business undertaking not to use any title in the town signifying he is a chemist, or to supply any of the article in dispute excepting to the present proprietors of the business, who undertake to purchase all they require from him.

MUNICIPAL HONOURS TO CHEMISTS.—Mr. Alderman Hough has been re-elected Mayor of Doncaster. Mr. Dobb has been re-elected unopposed to the Sheffield Town Council.

The body of a man was discovered on the 3rd instant in a wood near Chesterfield, after lying there several days. Two small bottles labelled "laudanum," and having the name of Chesterfield chemists on them, were found near to him. At the inquest a verdict was returned in accordance with the medical testimony that deceased had taken a dose of laudanum, which caused stupor, and death had resulted from starvation.

A groom in the employ of Dr. Stewart, of Barnsley, was summoned by the police on the 28th ult. for driving at the rate of 12·14 miles an hour. His master was stopped to attend to a lady who was seized with an epileptic fit in the road, and had ordered defendant to drive as quickly as he could for a cab to take her home. For the defence the solicitor submitted that he was quite justified in what he did. In such a case of emergency there was a justification for the fast driving, and he pointed out that fire-engines were allowed to drive rapidly to save property. A fine of 2s. 6d. and costs was imposed.

An inquiry was held on the 20th ult. as to the cause of death of a man employed as a "brewer" of sulphate of ammonia at the Chesterfield Gasworks, who was killed by the explosion of a boiler used in the manufacture of ammoniacal liquor. The evidence showed that the process adopted in the manufacture of sulphate of ammonia was as good as could possibly be. It was necessary to open a cock or tap which was in a pipe which connected the boiler with a vat adjoining whenever the apparatus was working. The deceased must have forgotten that the tap was shut, and hastened to open it just before the explosion, the result of which was to set in motion the gases which had previously been at rest, which produced a tremendous pressure sufficient to lift the boiler from its seat and carry it outside the building, filling the place with acid and steam. A mechanical safety-valve would not last an hour, owing to the corrosive action of the liquids. The jury found death due to

If chemists approve of the system, as the Scotch say, of "heckling" candidates for Parliament, now is the time. There are no less than a dozen candidates for the various divisions of the borough of Sheffield, to say nothing of the large number in the immediate vicinity. With six Liberals, five Conservatives, and two extreme Radicals; with two office-holders in the present and one in the late Government; with five barristers, a physician, a son of the Lord Chief Justice, a colonel, the champion of sailors, and the ex-head of the Criminal Investigation Department, Scotland Yard, all in the field making pledges and seeking suffrages, it should be an easy matter to distribute and obtain information as to what alteration the law of the land requires to ameliorate the condition of long-suffering pharmacists, and to adequately protect the public. If the claims are only put forward in the eloquent and appealing manner to which your columns testify, and which is heard wherever a body of pharmacists do congregate, nothing further could surely be needed or more convincing.

### SCOTLAND.

### ABERDEEN.

THE ABERDEEN AND NORTH OF SCOTLAND SOCIETY OF CHEMISTS AND DRUGGISTS.

On October 16 this Society opened their new rooms at 21 Bridge Street, Aberdeen, when Mr. David Ritchie, the President of the Society, occupied the chair, and delivered an appropriate speech. Tracing the movement which had so auspiciously ended, he remarked that it had been set on foot and earried out by a number of gentlemen, amongst whom, he would be obliged to meution, were Bailie Paterson, Mr. Strachan (their secretary). Drs. Presslie and Gordon, and their humble servant. Adverting to the work of the Society, he observed that the first efforts included the establishment of a laboratory in the Gallowgate for the use of assistants and apprentices, and also lectures on various subjects. These efforts were continued for some time under much difficulty, until the evening classes at Gordon's College took their place. That transference, however, did not render it the less necessary for the Society to have rooms of its own, as it was most desirable to have a place where assistants could meet and spend their evenings or work and study together. To this end they have supplied their new premises with a laboratory, a museum, and a lending reference library. He concluded by declaring the rooms open, and expressing the hope that they might serve the purpose for which they were designed. Bailie Paterson congrutulated the Society on the opening of the rooms, and Dr. John Gordon added a few words. Afterwards Mr. James Sim (of Davidson & Sim), hon. president of the Assistants and Apprentices' Association, opened the session in the same room; with an address on "Self-culture," and treated the subject in a very able mauner. Mr. Smith, Vice-I'resident of the Assistants and Apprentices' Association, moved a vote of thanks to Mr. Sim for his address, and also to the masters' society for the great boon bestowed on them by giving them the use of the rooms. Several other members having spoken, and a vote of thanks given to the chairman, the meeting terminated. The rooms consist of a large apartment where nicetings can be held, and is capable of holding about 100 persons, which is devoted to the purpose of a reading-room and museum, which contains several hundred specimens of materia medica and pharmacy, and is used also for the library. There is also a fully-equipped laboratory, eapable of allowing twelve persons to work at once, and which is endowed with the principal apparatus for chemical research.

We have been specially asked to state that the decoration of the walls of the rooms has, however, not yet been attended to. The desire of the Society is to get them covered usefully, and contributions of engravings or other representations of any of the fathers of the trade, or of any other interesting and instructive subject, will be gladly received by the Society.

Blank sheets have been the order of the day for drug travellers who have visited this city since the Conference. That is because some more fortunate ones have the faculty of combining business with pleasure and science.

### BROXBURN.

Mr. Findlay Stua:t, clemist and druggist, lately manager of the Broxburn Medical Hall, is about to commence business in this town.

### DUNDEE.

The business of the late Mr. J. M. Lyon is in the market.

One of the more important grocers of this town, who commenced to "cut" patents, is reducing his stock. He finds that the trade does not pay.

Bailie Doig, a leading Dundee chemist, has been elected to the Town Council without opposition; and Mr. M'Kinnon, also a chemist and druggist, has been advanced to the position of Second Bailie.

### 'EDINBURGH.

Mr. Dunean F. Maedonald has purchased the business of the late Mr. Edwin Reynolds, 7 Morningside Terrace.

Mr. James Bird, St. Leonard's Street, is shortly to proceed on a sea voyage for the benefit of his health. For two or three years back Mr. Bird has combined medical studies with

pharmaey, and was just ou the eve of completing the former. We trust that he may return from the Antipodes with a large stock of health and renewed energies.

DEATH OF MR. ALEXANDER NAPIER, EDINBURGH.—We have received notice of the death of this well-known Edinburgh chemist, which took place at his residence in Edinburgh on October 20. Mr. Napier had been in failing health during the past two years. For several years he had suffered greatly from a painful affection of the eyes, but the immediate cause of death was a disorder of the liver. Mr. Napier served his apprenticeship in the town of Lanark, and came to Ediuburgh fully thirty years ago as an assistant to the late Mr. James Robertson, of George Street. From his service he went to South Cluk Street to conduct a business on his own account, which he had successfully done for a quarter of a century. In pharmacy ontside his business he has always taken a warm interest, and for many years previous to his death he was a member of the Council of the North British Branch, and his immediate colleagues showed their appreciation of his services by appointing him President of the branch, which office he held with much acceptance. Mr. Napier was eminently a Christian gentleman, and early in life his kindly disposition and earnestness of purpose wou for him the respect of his elders, a respect which has widened to the younger generation, towards whose efforts he was ever ready to give his countenance and support. Mr. Napier was in his fifty-second year, and was unmarried.

We are glad to learn that Mr. T. T. McCulloek, of this eity, has so far recovered from his serious illness that there is every likelihood of his early return to business.

The Edinburgh Chemists' Ball is to be held in the Freemasons' Hall, George Street, in the second week of January next. A very active committee has been appointed, with Mr. R. L. Hendry, 33 Earl Grey Street, as convener. It is proposed to make the assembly of more than local importance, and for this purpose the committee is securing the support of influential pharmacists as stewards.

The young votaries of pharmacy are showing much enthusiasm in their Association this winter, and they talk of holding meetings in section, so as to adapt themselves to the accommodation afforded them.

Mr. George Robertson, who for the last seven years has been with Messrs. Lindsay & Gilmour, Edinburgh, has purchased the business of Mr. G. M. Welch, Inverleith Row.

### GLASGOW.

The Sale of Methylated Spirit.—William Wilson, a chemist and druggist, of Paisley Road, Glasgow, was prosecuted by the Inland Revenue on October 16, on two summonses, one of which charged him with selling methylated spirits, he not being licensed, the other with selling the same for a beverage. The defendant pleaded guilty to the first charge, but denied the latter. The Supervisor of Inland Revenue therefore withdrew the second charge, but intimated that methylated spirit is being sold in Glasgow and other towns as a beverage, and pressed for a heavy penalty. The magistrates inflicted a penalty of 5l., with the alternative of thirty days' imprisonment.

At the Justice Court, Glasgow, October 29, William Paterson, herbalist, Great Hamilton Street, was charged with having sold, on Sunday, September 6, methylated spirits as a beverage, in contravention of the Spirits Act, 1880. The accused pleaded "Not guilty." John Calton, private detective, deposed that on Sunday night he went to defendant's shop, and also sent two other persons, John Carter and William Carter, for the purpose of purchasing methylated spirits mixed with peppermint. To each person the spirit was supplied. John and William Carter, having corroborated Calton's evidence, the Bench found the accused guilty, and imposed a penalty of 50L, or three months' imprisonment.—At the same court, on the same day, James Downe, retailer of methylated spirits, was charged with four separate contraventions of the Spirits Act, 1880. Accused pleaded "Not guilty." John Calton, private detective, deposed that he and the brothers Carter watched on Sunday, September 6, the defendant's premises, and found a considerable traffic was being carried on. He then sent

one of the witnesses into the shop for a glass to drink, but he could not get it. He then sent John Carter in with a shilling and a half-mutchkin bottle to get a half mutchkin of methylated spirits, as he saw people coming out of the shop with bottles in their hands and drink the contents on the opposite side of the street, and he knew by the smell it was methyl. John Carter gave evidence to the fact that he obtained a gill of methylated spirits for 6d., and at his request some peppermint was added to make it more palatable. William Carter also testified that he had been served with methylated spirits toned down with peppermint on that Sunday. Agnes White, for the defence, said that she served the spirits, but it was understood that it was required for trade purposes or external application. Mr. Brodie, of the firm of Brown Brothers, wholesale chemists and druggists, said he was intimately acquainted with defendant and his business, and that his firm supplied defendant with all his medicines, and had done so for ten years, and that the sale of methylated spirits did not exceed the average for such a business. John Lees, chemist and druggist, stated that the mixture of peppermint with the methylated spirits did not necessarily imply that they were to be used as a beverage. The peppermint would assist the stimulating qualities when externally applied. The Court, however, found the accused guilty of two breaches of the Act, and imposed a fine of 50%, or three months' imprisonment.

FAILURE OF A FIRM OF DRYSALTERS.—Messrs. Steele & Co., drysalters and indigo merchants, 88 St. Vincent Street, have been obliged to suspend payment, owing to heavy losses in their trade. At a meeting of their ereditors, held on Friday, November 6, a statement of affairs was submitted, which showed their liabilities to be 21,0691., assets 17,1501. The preferable claims amount to 1,0381., thus showing a reversion of about 16s. 3d. per pound, subject to expenses. A trust deed in favour of Mr. Hutton, C.A., was granted.

Amid the labours attendant on removal of his principal business to larger premises in Buehanan Street, Mr. Daniel Frazer has been able to produce a valuable history of that busy thoroughfare. The book has an interior as interesting as the exterior is attractive. Not so pleasing is another little book in which Mr. Frazer has had a hand—it is a reduced price list of proprietary articles.

Mr. WILLIAM YOUNG, of Glasgow, has been appointed representative in Scotland for Messrs. Bourne & Taylor, and after Christmas is to devote his whole time to the services of that firm.

### MONTROSE.

DEATH OF A RETIRED DRUGGIST.—On Saturday, November 7, Mr. John Barelay, a retired druggist, living in Montrose, was found dead in bed. He had suffered from sleeplessness, for which had been in the habit of taking opium; and, as a piece of the drug was found under his pillow, it is supposed that he had taken an overdose by mistake.

### OBAN.

INSOLVENT.—Mr. P. C. McKuchar, carrying on business as a druggist in Oban, has applied for *cessio*. His examination takes place in the Sheriff Court House, Inverary, on November 20, at 12 o'clock.

NARROW ESCAPE FROM POISONING. — On October 26 a Roman Catholie priest, in company with three ladies, while travelling from Oban, partook of some brandy diluted with what was assumed to be water. No sooner had he drunk it down than the lady discovered that in place of water she had used a solution of morphia prepared for external use. Upon reaching Strathyre Dr. Todd, of Callender, was wired to be in readiness at that station, and upon the arrival of the train at Callender, a little over half an hour after the incident, emetics and restoratives were applied, fortunately with success, and in a couple of days the young gentleman was able to resume his journey. The mistake arose, it is said, from the fact that before leaving Oban the lady requested her maid to put a 12-oz. bottle of water, wrapped in paper, into her bag. This was done, but there happened also to be in the bag a 12-oz. bottle, wrapped in paper, containing the morphia solution, and when the brandy was

mixed the paper was not removed from the bottle. The quantity of morphia (muriate) swallowed was about 2 grains.

### PEEBLES.

A pharmacy is to be opened here by Mr. W. Sanderson.

THE COMB WORKS OF MESSES. STEWART, OF ABERDEEN.

URING the late Pharmaceutical Conference at Aberdeen a number of works in the city and district were kindly thrown open to the inspection of the members, and amongst them were the famous comb works of Messrs. Stewart & Co. The extent of the business carried on at the works, which, it may be remarked in passing, were commenced in 1835, may be judged from the fact that 180,000 horns are cut up every week, which affords an output of combs at the rate of 15,000,000 per annum. The horns are obtained from the home markets, Australia, and South America. A large quantity of buffalo horn is also used, which comes from various quarters. Each market supplies a horn of a distinct character, and the characteristic is closely maintained in the production of the combs. The processes adopted in manipulating the horn in its preliminary condition, if not also throughout, are, however, one and the same for all kinds. The first operation is to cut the horn in several ways, so that when it is opened it shall be of rectangular shape. This cutting involves the loss of several large pieces, and also of the tips, so far as comb-making is concerned, but the pieces are sold to manufacturers of other commodities, so that the total loss is comparatively slight. To assist the action of the knife the horn is heated to a certain degree over a fire, by the side of which the operative sits. When cut the horn is again softened and opened by tongs, and placed between screw-plates, wherein, under the influence of a strong pressure, the pieces are flattened out. It is a characteristic of the horn to remain when cold just as it is shaped when warm, so that when the pieces are removed from the screw-plates they do not warp or curl up again. Such pieces as are intended to be used for imitation tortoiseshell are subjected to an enormous pressure between heated and oiled iron plates. This heavy pressure, however, weakens the horn and renders it liable to split. Omitting the drying stage, the next process is to cut the pieces into suitable sizes and shapes for combs; and after that the teeth are cut. Originally this was done by hand, the workman using a tool known as a "stadda," or "steady"; now it is done by circular saws, and of a kind which may be described as unique; some of them are so fine and thin as to cut from seventy to eighty teeth per lineal inch. They revolve at a very rapid rate, but instead of travelling up to the horn, the horn travels up to the saw. After each cut the horn is automatically moved forward the exact breadth of a tooth, and it is possible to arrange that a fineor a coarse tooth shall be cut at pleasure. This in itself is sufficient to stamp the machine as a most ingenious piece of work.

There is a second method of cutting the teeth, known as "twining," from the circumstance, it is said, of a pair of combs being eut out of a single plate of horn. This process comprises the cutting of the plate in such a manner that what is cut out to form the tooth of one comb is utilised to form the tooth of the second comb, which lies immediately opposite to the first comb. This may be understood by dovetailing two combs into each other. The two end teeth, being thicker than the others, show a gap when the two combs are separated, but a little warming and a slight bending make that unsightliness disappear. The cutting in this case is done by a pair of chisels, which travel fast or slow as may be required, according to the character of the teeth to be cut, each chisel descending alternately. This apparatus is also of a highly ingenious type, and betokens the skill of the inventor, the full measure of which, however, only a comb manufacturer can thoroughly appreciate.

After the tooth-cutting the combs are next thinned or tapered down to their outer edges. This is done on grindstones, and in due succession the teeth are rounded, pointed, or bevelled, as the case may require, by a special kind of file

or rasp. If from this stage it is necessary to treat the horn to make it an imitation of tortoiseshell, the object is effected by first applying a dilute nitric acid, which imparts a light yellow tinge, and afterwards by dropping over certain spots a composition containing caustic soda, litharge, and dragon's blood. In the course of some time the composition is washed off, but the spots beneath it are found to be slightly swollen up and stained to a deep orange tiuge. It then only remains to polish the combs, whether they are in plain horn or in imitation tortoiseshell. This is done by first sand-papering to get a smooth surface, then buffing on leather wheels, and finally polishing on dolly wheels, i.e., wheels made up of circular pieces of calico with frayed edges, which, though so soft in themselves, present a hard face when being rapidly revolved. There is much of interest to be noticed in connection with the elaboration of fancy and ornamental combs, and not a little hand-carving is required to deal with this class of work, but it need hardly be detailed in this brief sketch. Messrs, Stewart pride themselves upon the superior appointment of their establishment, which includes, they affirm, the latest and most approved type of plant. They give employment to 785 men and girls, all of whom are on piecework.

# EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSISCIATION,

The eighth session of this Association commenced on October 14, in the Pharmaceutical Society's house, York Place, when the President's delivered his inaugural address.

After thanking the members for the honourable position in which they had placed him, Mr. Hill proceeded to give a few thoughts on the life-work of the young pharmacist, from which we extract the following:—

### THE MAKING OF MONEY

is such an absolutely essential preliminary to success in life that no wise man will disregard or neglect it. Nay, so important is it, that even from the rigidly scientific atmosphere of a pharmaceutical conference it refuses to be altogether excluded. . . But it seems to me that to constitute mere money-making the sole or even the main object of life is to rob it of all its dignity, and degrade it to the position of grinding slavery, which is the fruitful parent of selfishness, niggardliness, and all uncharitableness. . . It is of vast importance that, from the very outset, we should cherish a lofty

### ESTIMATE OF OUR COMMON CALLING.

It is a branch of the great healing art, whose aim is to lessen human suffering, to combat the hydra-headed monster of disease, and to ward off the pestilential plague. The rapid extension of medical science in all departments demands even more and more the introduction of the great principle of division of labour; and the devising and preparing of new remedics, which has to a large extent been the work of the physician, is gradually being handed over to the pure pharmacist.

### TO MAKE THE MOST OF LIFE

the object of primary importance is to make ourselves masters of all that pertains to the calling of a pharmacist. One of the first requisites is self-control and the cultivation of the important habit of study. It is necessary, also, to concentrate all our efforts on a clear and definite object. There is such an object provided in the examinations of our calling, and for those who have these in future it will be their highest wisdom to make the passing of these examinations the all-absorbing object of pursuit, rigidly confining themselves to one line of study, and resolutely refusing to be turned either to the right or to the left until that all-important point is reached.

### SYMPATHY WITH THE WORK IN HAND.

It is wonderful how very easy it is to do a thing which is entered into heartily and with a will, but how hard a task it is to do a piece of work which goes against the grain. Surely, then, gentlemen, to regard this work as a disagreeable

necessity, to be performed under a chronic protest, is to load ourselves gratuitously with an altogether unnecessary burden.

### CULTIVATION OF A HABIT OF OBSERVATION.

By a diligent cultivation of a habit of observation we may, perhaps to a degree we little dream of, promote the cause of pharmacy. There are frequently recurring in the ordinary routine of a druggist's shop peculiar mixtures and unusual reactions, which would well repay observation and experiment with a view to their elucidation. Diligently follow up such work, and you will find it not only pleasant and profitable, but successful beyond your most sanguine expectations.

### EXPERIMENTING IN SHOP HOURS.

In connection with this subject there is a matter to which I will veuture to take this opportunity of calling attention. Speaking Irom experience and observation I believe there is, on the part of the great majority of employers, a disposition to allow apprentices or assistants to make experiments within reasonable limits; but, from what I have seen and heard, I am not sure that this is sufficiently understood, and, consequently, much of such work is done in a kind of half-clandestine manner. I think it would be a great advantage, both to employers and employés, if there was a clearer understanding on this subject.

### KEEP AN ACCURATE RECORD.

Many valuable observations have been lost because they have not been recorded. It is, therefore, of great importance that we should keep an accurate record of our observations and results. Sometimes it is only when we come to write these down that we get a clear and thorough grasp of their meaning.

### Work to be Done.

If we see work to be done I am convinced that it is our bounden duty to do it to the best of our ability, and to duly record it in the many public channels presented to us, and then leave it to better men to carry it still further, if they can.

Mr. Hill's address was very attentively listened to by a large audience, and a vote of thanks, moved by the Vice-President, seconded by Mr. MacEwan, was carried with hearty acclamation. Thereafter a discussion took place, in which Messrs. Ainslie, sen., Boa, Crowden, Hurry, and others joined, and the opinion was generally expressed that chemical experiments in business hours are not good for business; but it was urged, on the other hand, that experiments in pure pharmacy should be fostered by masters; and Mr. Hill, in his reply, stated that it was such experiments which he particularly referred to. Some formal business followed, and, after a vote of thanks had been accorded to Messrs, MacEwan and T. Stephenson for their services as interim secretaries, the meeting adjourned until November 4, when an even larger audience assembled. The first business on the programme was the report of the Prize Committee on the result of the apprentices' competitive examination, which was read by the secretary, Mr. William Dunean, and showed that eight apprentices had competed, with the following result :-

1st Prize (ticket for five months course theoretical chemistry at the Surgeons' Hall)—Mr. A. R. Bennett, 69 South Cluk Street.

2nd Prize (British Pharmacopæia, Wilson's "Chemistry," Macadam's "Practical Chemistry," and Balfour's "Botany") —Mr. J. T. Grant, 52 North Bridge.

3rd Prize, presented by the President (British Pharmacopacia and and Macadam's "Practical Chemistry")—Mr. A. Findlay, 1 Brandon Terrace.

4th Prize, presented by Mr. Crowden (British Pharmacopæia)—Mr. D. S. Bennet, West Maitland Street.

In presenting the prizes the President referred to the excellence of the papers handed in by the candidates, and stated that it was the opinion of the committee that this competition was in every sense the most successful ever held under the auspices of the Association. He then called upon Mr. Peter MacEwan to read the first of a series of papers on the new British Pharmacopocia, which was devoted to the chemistry of the book. After referring to the necessity of practical pharmacists having a leading share in the compilation of the Pharmacopocia, and advocating provincial repre-

sentation on the committee, Mr. MacEwan proceeded to explain and criticise the processes for the preparation of the new chemicals and their preparations. This took up the greater part of the allotted time, and a summary was given of the second part of the paper, which dealt with alterations in composition and processes of old chemicals, and with new tests and assay processes. Some interesting experiments and a large collection of specimens were shown to illustrate the paper; and, on the motion of the President, seconded by Mr. Turnbull, a vote of thanks was accorded to Mr. MacEwan. At the next meeting of the Association, to be held on November 18, Mr. Hill will read a paper on the "Botany and Materia Medica of the Pharmacopacia." The Association has at present nearly 100 names on its roll, and there is every prospect of the membership being further increased.

### PHARMACY IN AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, VICTORIA, September 30.

AN AMENDED PHARMACY ACT

WAS introduced into Parliament by Mr. Bosisto, M.P., on September 9, and it speaks highly for the confidence of the legislature in the framers and introducer of the Bill to find that it passed the first and second reading and was committed in exactly seven minutes.

Mr. Bosisto was somewhat surprised at the rapidity with which it passed these stages, for although there are few new principles involved, still there is generally some one who has a grievance to air when an amending Act is introduced.

It was understood that Mr. Bosisto was to have given the House a résumé of the work done during the last ten years by the Pharmacy Board, but this will now be deferred until the final reading of the Bill, a report of which you will no doubt receive in due course.

In the meantime I may mention that some of the principal amendments are the omission of the word "Victoria" in section 2 of the present Act, which will allow the Board to admit persons who have been in business outside this colony. In section 15 provision is made for removing any person from the register who shall be convicted of felony or misdemeanour, in addition to the existing clause. Subdivision 4 of section 18 is entirely repealed, and the follow-

ing is substituted:-

"He shalt have passed a preliminary examination before the commencement of his apprenticeship, and shall have served for not less than four years as an apprentice in the business of a registered pharmaceutical chemist or chemist and druggist or homopathic elemist keeping open shop, or dispensary of any friendly society registered under the Friendly Societies Statute, 1865, or the Friendly Societies Act, 1877, or any Act amending the same, or dispensary kept in connection with any public hospital under the management of a registered pharmaceutical chemist for the compounding and dispensing of the prescriptions of legally qualified medical practitioners, and shall also have attended one course of lectures, and passed examinations during one session in each of the following subjects at the University of Melbourne, or some school or college of pharmacy recognised by the Board; Materia medica, botany, chemistry and praetical chemistry; and shall have passed examinations before the Board or before examiners thereby appointed as hereinafter provided in the subject of practical pharmacy, and any subject that may be prescribed by the Board with the approval of the Governor in Conneil. Provided always that any person having served a period of not less than three years' apprenticeship, whose period of apprenticeship shall have commenced three months at least before the date of the commencement of the Principal Act, either with a chemist and druggist or with a recognised licentiate apothecary, or in a public hospital, shall be required to pass such modified examination only as the Board may prescribe.

These, together with a number of technicalities, comprise every alteration that the Committee who proposed the samendments could suggest, and they state, if passed, we hall have an Act which will leave nothing to be desired.

### THE FAILURE OF THE CONFERENCE

has furnished much subject for conversation. Whatever is the cause of failure, there can be no doubt New South Wales has missed a chance of not only doing good for herself, but also of setting at rest many questions which are sources of annoyance to all concerned with the laws relating to pharmacy. Mr. Tompsett has given notice of motion that a Pharmaceutical Conference shall be held in Melbourne in October 1886.

There have been a great many

### CHANGES IN BUSINESS

during the last month, and at one of the principal goldfield centres of population, Sandhurst, the whole of the leading pharmacies have changed hands, Mr. Holdsworth having relinquished business, and Messrs. H. Trumble and E. Garsed having both died. In Melbourne and the suburbs there have also been a great many changes. Business has, however, been good, and pharmacists have rarely, if ever, had such a busy time as during the last six months.

The briskness of business necessarily leads me to the subject of

TRAVELLERS,

who have not, however, been so numerous lately. Mr. W. J. Watkins (Evans, Lescher, and Webb) was, I hear, at the Cape on Angust 15, on his way out to Australia. Mr. W. Shepperson (Burroughs, Wellcome & Co.), after a through tour of New Zealand and the Australasian Colonies, is returning to England after an absence of two years. Mr. Francis Forrest (A & F Pears) is still in the colonies, moving from one place to another, and Messrs R. Langton (Langton, Eaden, Hicks & Clark) and J. Lakeman (Burgoyne, Burbidges & Co.) are always with us.

### AT THE COLONIAL AND INDIAN EXHIBITION

to be held in London next year, Victoria is likely to make a good display. I understand that Mr. Bosisto is preparing a splendid exhibit of colonial gums and drugs, and a colossal trophy of his specialty. Preparations of the eucalyptus will form one of the objects of interest. Mr. Bosisto has recently presented some splendid specimens to the museum of the College of Pharmacy.

The Pharmaceutical Society of Australasia have decided to forward to the London Exhibition a number of views of the College of Pharmacy, showing the lecture hall, laboratories, library, &c., and these, at the termination of the Exhibition, will be presented to the Pharmaceutical Society of Great Britain.

THE PROPOSED PHARMACEUTICAL SOCIETY OF SOUTH AUSTRALIA.

Our South Australian friends have had another meeting about the formation of a Society in that, colony, and Mr. J. Main, who is now in Melbourne, and who has taken an active part in the matter, speaks very hopefully of the result.

### IN NEW SOUTH WALES

newspaper controversics on topics of trade interest have at last ceased, and pharmacists are on the verge of fresh legislation.

A case that has called forth a considerable amount of criticism, and has not improved matters, is the sale of a business to an unqualified man. The law in New South Wales does not prevent an unqualified man carrying on business, it only restrains him from selling poisons, and the sale was perfectly legal, although injudicious, and has been the cause of much angry feeling. It has, however, brought to the front the fact that the law at present affords no protection to druggists in business.

THE TECHNICAL COLLEGE OF NEW SOUTH WALES

is rapidly developing into one of the most important and gigantic of our public institutions. It employs 100 teachers and about forty lecturers. The subjects taught extend from law

and architecture to bricklaying and blacksmithing. One of the latest departments formed is the department of dentistry, which is the forcrunner of the passing of a Dental Act, which will be introduced as soon as the subjects of medical legislation have been disposed of. A department of veterinary surgery is in contemplation, and at present there exists a class for students of this subject.

### FRENCH CORRESPONDENCE.

COLCHICINE AS A WIFE-KILLER.—Colchicine has made its first appearance in the criminal courts, and it must be said has not been a success. The Ribout poisoning case, just decided by a jury, was briefly as follows:-Ribout, a feather dealer in Paris, had a termagant wife and an attractive young female ward and apprentice. He was perhaps a little too attentive to the younger woman, as happens often elsewhere as well as here. About ten months ago his wife died rather suddenly, and shortly after he married the apprentice. rumours, and the fact of his having tried to obtain colchicine about the time of his wife's sickness, led to his arrest and the exhumation of her remains for chemical investigation. While he was in prison a letter, supposed to have been written by him to his second wife, was intercepted, and this letter contained very damaging admissions. But on trial the prosecution broke down on some important points. First, it had been admitted that Ribout tried to obtain colchicine, but it could not be proved that he ever procured any, a fact that should have been easily established in a country where the poison laws are so strictly enforced. Then the prosecution failed to show that the suspicious letter had been written by the prisoner, and finally they could not even prove that the first wife had been poisoned. The part most interesting to chemists and pharmacists is the testimony given by the experts, Brouardel and two other doctors. They confessed they knew of no satisfactory chemical test for colchicine, the alkaloid being very imperfectly known; they were obliged to own they could not tell whether the deceased had come to her death or not by colchicine. To cap the climax, Dr. Vulpian deposed that he had administered to a dog a chloroformic extract made from the cadaver, and the animal had not been inconvenienced. Of course Ribout was acquitted. Decidedly colchicine is a failure.

NOT A PHARMACIST'S MISTAKE THIS TIME.—A young physician of Nimes, M. P., was lately consulted by a female patient in regard to some trifling ailment. He took from a glass-case a box containing some white powder, and gave it to her with directions for use. Mme. R., the patient, took a small pinch of the powder, and, finding it very bitter expressed some doubts to the doctor. He, to quiet her fears, swallowed a good-sized dose of the powder in her presence, and dismissed her. Shortly after, before reaching her house, she fell in a faint, and was carried home by Leighbours who called another doctor. Emetics were administered, and she was soon out of danger, when she related what had occurred in Dr. P.'s office. The physician at once rushed to the house of his brother practitioner, but found him lying on the floor dead. The white powder was strychnine. This painful accident shows once more the wisdom of the French pharmacy laws which forbid physicians to dispense their own medicines, and direct pharmacists to keep all poisons by themselves in a locked closet, the key of which must never eave the dispenser's possession.

PRIZES FOR PHARMACEUTICAL THESES.—At the regular monthly meeting, held November 4, the Paris Pharmaceutical Society decided to grant a gold medal worth 300f. (12l.) to M. Mortagne for his thesis on Adonis vernalis, and a "mention honorable" to M. Charles Gallois for his thesis on "Percolation compared with maceration as a mode of exhaustion." There are other prizes within the gift of the Society, but no other theses were considered worthy of reward.

Female Doctors in Paris.—There are now only eight "doctresses" practising in Lutetia. They are:—Mme. Madeleine Brès, graduated in 1875; Mile. Clarisse Danel, 1876; Mme. Bourchier, 1878; Mile. Verneuil, 1879; Mme. Rosa Perrée, 1881; Mme. Guénot, 1881; Mile. Benoît, 1883; and Mme. Berline, a Russian, graduated in 1883.

Paris Night Medical Service.—During the past three months 1,907 night calls were made, against 2,446 during the same period last year. This corresponds to an average of twenty calls every night. The number of women taker sick were 992, men 627, and children 288. Accouchements, to the number of 231, were the majority of cases, next came gastro-intestinal affections, 202; wounds, 111; and diseases of the throat and respiratory organs, 191.

A FLOOD OF AMMONIA.—The Grenelle artificial ice company met this month with a singular accident. Through the breaking of a pipe the liquefied ammonia used for making the ice escaped from one of the holders, and spread in the neighbourhood. Men fell down suffocated, and plants and flowers were parched up as if burned by fire. Fortunately the quantity of ammonia was comparatively small, and all the victims recovered after exposure to pure air and simple treatment.

THE DISINFECTING MANIA.—In Lyons a man worked what the Americans would call the "disinfecting racket" in houses where plunder was likely to be found. He would call at a time when masters are generally absent, and pretend to be sent by the Board of Health to disinfect the apartment. Then with a charcoal furnace and some brimstone he would raise such a stink as to drive all the servants away. Stealing was then easy. But he finally came to grief. In Marseilles the performance was only funny. As the balancelle Clara was ready to sail, two men came on board with a hand-pump and a barrel of earbolic acid solution to disinfect the vessel, because her captain had died of cholera. In vain was it shown that the former captain had left long since, had caught the cholera in Toulon and died there; the men had been told to use their disinfectant on the vessel, and they meant to obey orders. As a compromise they were finally persuaded to disinfect the mainmast. This they did, and after bedaubing it to their hearts' content, they went away satisfied.

Composition of Hertzog's Swiss Pills. — Martin, Clémeneean, Perdreau, Broy, and Doucet were recently sentenced to various terms of imprisonment ranging from one to nine months, and to fines of from 50f. to 1,000f., by the Civil Tribunal of the Scine. They had been convicted of counterfeiting Hunyadi Janos, Birmenstoff, Bussang, and Orezza mineral waters, and Hertzog's Swiss pills. An interesting fact came out during the debates, namely, that Hertzog's pills are simply the Pilules de Coloquinte composées of the French Codex. Make a note of it, and keep for future use, but beware of the trade-mark.

To Replace Professor Baudrimont.—The vacancy caused by the death of the late Baudrimont, at the School of Pharmacy, is officially announced. Twenty days are granted candidates to produce their titles. As the lectures on pharmaceutical chemistry only begin with the second half-yearly session in April, it may be some time before Baudrimont's successor is appointed.

A New Library.—A new public library is soon to be opened in the rue Titon, under the name of Professional Library of Art and Industry. It derives its means from a legacy instituted by M. Aimé S. Forney, and is to be free to all on every day of the year, except extraordinary holidays. The collection of engravings, photographs, etchings, &c., is said to be very large and valuable.

NEW APPOINTMENTS.—G. A. Joubert has been appointed adjunct-preparator of natural history at the Paris School of Pharmacy, and M. Denigès director of the chemical and pharmaceutical laboratory at the Mixed Faculty of Medicine and Pharmacy of Bordeaux.

MR. GEORGE J. ROBINSON, of York, is very anxious that we should correct the paragraph in our last issue, which stated that the business carried on by Messrs. Davison & Robinson in that city for many years had been sold. Mr. Robinson says he bought Mr. Davison's share in 1877, and has been the sole proprietor since. This is an additional piece of information, but it does not affect the accuracy of our paragraph.

### THE IRISH PHARMACEUTICAL EXAMINATIONS.

In September last we printed a letter from an Irish Pharmaceutical Chemist calling attention to (what he regarded as) "the utter inadequacy of their final examination as regards pharmacy, theoretical and practical." He based his opinions upon the alleged shortness of the time allotted to the practical part, to the fact that candidates can assist each other, and that the scope in dispensing is too limited, candidates being seldom asked to dispense more than one simple mixture. He suggested that at least one prescription requiring more than elementary knowledge to be dispensed should be dealt with, and that suppositories, pessaries, &c., should be prepared by the candidates. He further suggested the propriety of having an independent examiner for candidates who are in the service of the examiners, or employed by chemists intimate with the examiners.

At the annual meeting of the Pharmaceutical Society of . Ireland on Oct. 5, the President, with some degree of warmth, alluded to this letter, and remarked that "the writer professed to know a great deal, but, if his statement was true, he knew a great deal more than he ought to know. The only persons who had access to the examinations were the visitors and members of the Council, and he did not think that any of those gentlemen could have been guilty of writing this anonymous communication." Replying to the allegation that the time devoted to the practical part was too short, the President observed : "A whole day was given to pharmacy, which was a great deal more than was given by any other licensing body that he knew of to that one subject." Adverting next to what he termed the "gross personal attack made upon the examiner" by the writer of the letter, the President said: "They had every confidence in him (the examiner). The writer is apparently ignorant of the existence of the visiting committee of the Council, who attend the examinations. The President further expressed the opinion that it was unfortunate that such communications should have been published by us without authentication by the name of the writer.

This last observation is quite irrelevant. We have no know-ledge whatever of the Irish examinations, but we think the subject is quite a suitable one for discussion in these pages, and we do not see any reason why correspondents who can help with information should not do so anonymously. Of course, as Mr. Brunker knows very well, we do not publish letters which are not at least privately authenticated.

The personal attack on an examiner is not evident. His method of examination is criticised and the facts stated are not contradicted, except that Mr. Brunker says a whole day is given to pharmacy. That is as it should be. But there seems to be some difference among authorities as to what a day means in pharmacy, just as there is in theology.

The following letters, received this month, will help the discussion. The Irish examinations cannot be a matter of indifference to English pharmacists, seeing that they confer the identical title which is the highest that can be gained in this country in pharmacy. We would remark, however, that the comments made on a candidate being in the employ of the examiner were hardly fair. The examiner's employé has a perfect right to present himself, and the Society cannot appoint a special examiner for the occasion.

The subjoined letter is from our September correspondent.

### The Irish Examinations.

To the Chemist and Druggist-

SIR,—Kindly allow me space to reply to the attack made on my letter appearing in your journal for September by Mr. Brunker, President of the Pharmaceutical Society.

He says, "The writer professed to know a great deal, but if his statements were true he knew a great deal more than he ought to know." Now, I would ask Mr. Brunker if he could prove my statements were false, why did he not at once brand my letter as a lie, instead of making use of the above extraordinary expression? But he could not.

llow do I know more than I ought to know? Are the proceedings of the council private? Have they secrets that will not bear the light of day? If their examinations are perfect,

why fear criticism? Why dread that the manner in which they are conducted should become known to outsiders?

I deny emphatically having made a gross personal attack on Mr. Evans, as Mr. Brunker alleges; I merely suggested the propriety of having an independent person present during the examination when candidates from his own establishment presented themselves, and, in doing so, consider I acted as his friend. Will Mr. Brunker assert that, when such candidates present themselves, Mr. Evans (or any other examiner similarly placed) can be considered a disinterested party, as an examiner should be. Would not a grinder examining his own pupils be locked on with suspicion, even though he bore the highest character for impartiality?

I am not ignorant of the existence of a visiting committee, as Mr. Brunker supposes, but I know from experience the utter uselessness of that body, as its members only look in occasionally, and seldom stay long in the examination room

Mr. Brunker does not seem to possess as intimate and accurate a knowledge of the mode of conducting the examinations and the general by-laws of the Society as one would expect from the President.

He says a whole day is devoted to pharmacy, which would lead persons to suppose that each candidate was engaged during the entire day at practical pharmacy; when, as a matter of fact, he is only about twenty minutes, or half an hour at the longest.

The examination in pharmacy begins at 11 o'clock, the first hour or so being devoted to the written and oral examination, and then each candidate gets a prescription or two to dispense, after which he is free to leave.

I have seen ten candidates present themselves, and yet their examination in pharmacy, both theoretical and practical, did not occupy an entire day.

Ile also states that no one has access to the examinations but members of the committee, whilst, under the regulations for examination, the first rule is:—"That members of the I'harmaceutical Society shall be permitted to be present at examinations."

Now I do not wish to enter into a war of words with the Council, but being myself a pharmaceutical chemist, and one who has the interest of the Society at heart, and anxious to see the position of pharmacists improved, I ventured to offer a friendly criticism, which seems to have aroused the ire of the Council; but the Council are not the licentiates, and I have the support of the licentiates, and as long as abuses exist, and come under my notice, so long will I expose them, until the examinations will at length be above reproach.

In conclusion, I will ask Mr. Brunker by whose authority the order of examination, as set forth in the notice sent to candidates for the October examination, was changed, botany and materia medica being taken on the second instead of the third day, and also how it was that none of the candidates (except one hailing from a certain establishment) were apprised of the change until they entered the examination room on the second day; yet we are asked to believe that such candidates have no exceptional advantages. Now everyone will admit it is an advantage to know a day previous the particular subjects for examination on the following day. Regretting I must still, owing to special circumstances,

remain incog., subscribe myself,
An Irish Pharmaceutical Chemist. 15/72.

AN IRISH PHARMACEUTICAL CHEMIST. 15/72 Dublin, November 1.

N.B.—Candidates in Ireland generally succumb to botany and materia medica, whilst in England dispensing proves fatal. Query, are the Irish candidates better dispensers than the English, or is it due to the mode of examining? I leave your readers to decide.

The following letter comes from another part of Ireland—SIR,—In the report of the annual meeting of the Irish Pharmaceutical Society I observed a few remarks were made regarding a letter on the above subject published in your September issue, and signed, "An Irish Pharmaceutical Chemist." The writer of that communication was said to be "apparently ignorant of the existence of the Visiting Committee of the Council." No doubt the Committee exists, but as regards the performance of its duties, according to my experience and that of others I have met, it is more imaginary than real. The visits are like those of angels, "few

and far between," so that there could be an occasional opportunity for a discussion on the mysteries of plaster-spreading, &c.

I think the examiner on pharmacy should examine the candidate without the aid of the official manual, and questions on the examinees source and habitat are certainly

out of place before the marks are awarded.

I understand one of the members of the Council prepares students for the Society's examination; he also pays an occasional visit to the examination room during its progress. In a competitive examination this would be unfair, and I question its propriety even under existing circumstances. Perhaps he is a member of the Visiting Committee above referred to.

Apologising for trespassing on your valuable space,

I am, &c.,

AN IRISH PHARMACEUTICAL CHICK. (47'72.)

In connection with this matter we print the papers of the October examinations. They do not prove much, because we are without particulars of the *viva voce* examination, and besides do not know what proportion of the questions are required to be answered.

### GENERAL AND PHARMACEUTICAL CHEMISTRY .-DR. EDMUND W. DAVY.

### Written.

1. What are the only simple or elementary substances which assume the gaseous state under the ordinary conditions of temperature and pressure? Describe their most characteristic physical and chemical properties.

2. How would you experimentally demonstrate the very close agreement which exists between animal respiration and the combustion of the different substances we burn for

the production of heat and light?

- 3. State how the calcis hypophosphis is directed to be prepared in the British Pharmacopecia; and express in chemical symbols the charges which take place in the
- 4. Explain in general terms how chloroform, iodoform, and chloral hydrate are obtained; and give their chemical formul:e.
- 5. State how the acidum hydrocyanicum dilutum is prepared, and its strugth determined, as directed in the British Pharmacopicia. Explain also the principles on which that determination is based, and give the percentage of real or anhydrous hydrocyanic acid the official diluted acid should

### GENERAL AND PHARMACEUTICAL CHEMISTRY .-DR. EDMUND W. DAVY.

### Practical.

1. By the employment of suitable chemical tests, determine the nature of the powder marked " A.

2. Ascertain the alkaloids in the specimens marked "B" and " ("

3. Determine, by a systematic chemical analysis, the metal and acidulous radicle in the solution marked "D."

4. One hundred cabic cartimetres of the volumetric solntion of the hyposulphite of sodium of the British Pharmacopicia being equivalent to 0.355 of a gramme of chlorine, determine, by its employment, the percentage of available chlorine in a given sample of the liquor calcis chlorinate State also the principles on which this method for the determination of such chlorine depends; and express by chemical symbols the reactions which take place in this process.

5. One thousand grain measures of the volumetric solution of iodine of the British Pharmacopæia corresponding to 4.95 grains of arsenious acid, determine by its use the percentage of that acid, or of its equivalent, in a given sample of the liquor arsenici hydrochloricus; and express in chemical symbols the changes which take place in that determination. State also the prescribed strength, as regards arsenic, of that liquor of the British Pharmacopæia.

### BOTANY .- DR. DUFFEY.

1. Describe a Raceme, Corymb, Catkin, Spadix, and Cyme. 2. Mention the medicinal plants belonging to the natural

order Compositæ.

### MATERIA MEDICA.—DR. DUFFEY,

1. Name the fluid preparations of arsenic in the B.P., and give their strength and doses. State also what preparations

of iron may be given in mixtures with them.

2. Podophyllum. What part of this is used? Give its source, B.P. characters, and dose of its active principle.

### PHARMACY.-MR. EVANS.

1. What is turpentine? How is it obtained? State dose, and give a list of its preparations.

2. How are the two liquors of perchloride of iron prepared? State what preparations they enter into, with doses.

3. What is jalap? State accurately how the resin and extract are prepared, with dose of each.

4. What are the gums of the British Pharmacopæia? and name four preparations they enter into.

### THE EXHIBITION OF AËRATED-WATER MACHINERY AND ESSENCES.

THE seventh annual exhibition of acrated-water machinery and essences, forming a considerable portion of the national exhibition and market of machinery and appliances, was held at the Agricultural Hall from October 26 to 31, at which the following were among the principal exhibitors:

Messrs. Barnett & Foster exhibited a number of their single and double prize medal machines, their single and double "Niagara" soda-water machines, their single and double pumps and single "Niagara," and single horizontal cylinders. They also showed their steam filling and corking machines, with or without syrup-pump, which has a capacity of 60 full-size bottles per hour. In addition to other specialties, such as concentrated compounds for the instantaneous manufacture of saccharine drinks, they exhibited in operation Foster's patent special beer carbonating and bottling machines, for converting still beers, wines, or cider into sparkling drinks, and dispensing with all fermentation.

BARRETT & ELERS had an attractive display of their patent screw-stoppered bottles, which continue to grow in favour both for aërated waters as well as for bottled beer.

BRATBY & HINCHLIFFE made a good show with a variety of their soda-water making plant, particularly their new "Monarch" turnover filling machine, and also a number of requisites for the mineral-water trade. Their new patent citrochloric acid, for improving the flavour of lemonade, ginger ale, and essential oils and essences, were also put forward with some prominence.

W. J. Bush & Co.'s exhibit of essences was an extensive one; the stand including fruit essences, soluble essences of Jamaica ginger, chemicals used in aërated-water trade, mineral salts, essential oils, lime juice, colouring matter, and French creams.

THE CASTLEFORD GLASS BOTTLE COMPANY (LIMITED) had a stand upon which a variety of types of bottles made by them were shown, some of them being fitted with King's, Vane's, Longbottom's "Petit," and other stoppers.

Mr. II. FAVARGER exhibited the double generators made upon Mondollot's patent for the continuous and automatic production of carbonic acid gas, which enables, it is claimed, the production of a cheap and pure gas. There was also shown in motion the Hercules pumps, double generators, copper purifiers, and a new upright saturator.

HASSALL & Co. made a show of their phosphocitric acid, which, as will be known, is intended to supersede citric and tartaric acids for acidifying aërated beverages.

HAYNES & FINNEMORE were present with an exhibit of soluble essences of various kinds, notably of ginger, made under their special process. They also showed ginger-beer extract, several fruit essences, flavouring essences, and quilline froth, essential oils, lime juice, colourings, salts, and chemicals.

IDRIS & Co.'s stand chiefly comprised improved syphons and improved seltzogenes, essences for mineral waters, and

cordials, lime juice and lime juice cordials, and chemicals required in the mineral-water trade.

INGRAM & ROYLE exhibited amongst other things the Johannisbrunnen natural water, and Blackwell's Durham topaccos and Durham eigarettes, for which they are special

Mr. P. A. MAIGNEN had a good display of his well-known "Filtre Rapide," concerning which was shown a testimonial from Viscount Wolseley, the "filtre" having been used in the late Soudan campaign. In addition to this there was shown his patent "Anti-calcaire," intended to be used for softening hard water. The material is in the form of a powder, and a small quantity of it is sufficient for a large amount of water, the softening being effected by merely dropping the powder into the water and leaving it to operate. In a short time the process is completed, and the elements of the hardness find their way to the bottom of the vessel. An automatic machine, a model of which was at work, distributes from a hopper the powder in equal proportions to the amount of water to be operated upon. The sediment need only be removed when a quantity has accumulated.

Mr. W. MEADOWCROFT had a stand upon which were shown specimens of his specially prepared concentrated solublc essence of Jemon, claimed to be of very great strength, extra strong soluble essence of orange, a number of soluble essences required for mineral water production, and some essential oils, such as of lemon, orange, peppermint, limes, otto of roses, &c., and burnt sugar colourings.

Mr. D. RYLANDS, now the sole partner of the late firms of Codd & Rylands and of J. M'Ewen & Co., exhibited, in addition to a variety of specialties, an improved type of his patent crystal valve self-opener a rated-water bottle, with the valve now placed in the contracted part of the neek. The Rylands "Reliance" globe-stoppered bottle was also shown. This is regarded as an improvement upon Codd's bottle, there being in the new patent two ways of holding the bottle as against the one in Codd's. In soda-water machinery there were observed specimens of M'Ewen's patent anti-atmospheric generators, a double-pump acrated-water machine with glass pump-barrel, a patent improved chemist's plant with antiatmosperic generators, besides other varieties of plant more or less known.

THE SILICATED CARBON FILTER COMPANY were present with a variety of their famous filters, of which the most noticeable were the double-cylinder filters for high or low pressure, fitted with patent movable blocks and specially adapted for dealing with large quantities of water.

STEVENSON & HOWELL made an exhibit of various specimens of their productions, among which may be mentioned their American foam syrup, soluble essence of Jamaica ginger, essence of lemon, of lemon squash and Tangerine oranges, of Belfast ginger ale, of capsicine, and a number of other soluble essences well known in the trade for winter drinks and cordials. Fruit essences, too, were well represented, as were also several species of oils, colourings, and salts for natural mineral waters.

THOMAS SYMINGTON & Co. invited visitors to discuss at their stand the merits of their widely known essences, both of pure coffee and of coffee and chicory, and also of their dandelion coffce essence.

Mr. N. G. WILCOCKS made an attractive display of a number of his well-known specialties, among which were the "Victory" in several varieties, and the "Southern Cross," also in several varieties, all of them having been tested by many makers of aërated waters. As to something new, it may be observed that Mr. Wilcocks had on view a new registered design and patent turnover filling machine, which amongst other virtues possesses the excellences of light construction with strength of parts, and an automatic action. There was also on view the older "Eclipse" turnover filling machine, the "Matchless" tube-filling machine, and the "Middlesex' and the "Quadrant" corking-racks.

A. & M. ZIMMERMANN had a working machine for acrating draught beer and for bottling beer by pressure of liquefied carbonic gas, which is stored in a liquid state. Although primarily adapted for beer, the arrangement can be well used for acrated-water manufacture.

THE CHEMISTS' AERATED AND MINERAL WATER ASSOCIATION (LIMITED).

THE Seventh Annual Meeting of this Association was held on the 11th inst., at Anderton's Hotel, Fleet Street. Mr. H. Davenport took the chair. There were about forty

shareholders present.

In placing the yearly report before the meeting the chairman pointed out that there was an error of 51% in the front page of the balance-sheet before them. This he playfully explained was probably owing to the excessive care which had been taken in the figures of the more detailed state-

The accounts showed a profit of 1,8447. 10s. 7d., which, after allowing for sundry deductions, as detailed in the statement before the meeting, enabled the directors to declare a dividend of 6 per cent, free of income tax. The chairman congratulated the shareholders on having held their own for seven years; and especially on having increased during the past year from 908 members to 1,193, a much larger increase than had occurred in any previous year. Even chemists who were non-members admitted the great good the Association had done them in compelling other mineral water manufacturers to better study their interests.

In spite of the very bad season, he was glad to be able to tell them that sales had not fallen off. But he felt bound to explain that this was in consequence of the increased number of members; for the trade after the end of July thoroughly collapsed; and August had been one of their worst months. This he attributed to the chilly, unseasonable weather which just then set in. He found the ledger sales a wonderfully accurate barometer. The directors had been trying the experiment of delivering by their own vans frec to London customers; but he was not satisfied with the result, and thought they could not afford to continue FREE delivery, although he thought it might be done at less than the old charge of 6d. per day.

There was another innovation which, as a private individual, he could not advocate, viz., the supply of hand bills gratis to members; but as this seemed to be the general desire of shareholders, of course all he, as a director, had to do was to interpret and act upon the wishes of his constituents. No doubt the bills greatly assisted them, and had done a deal to solidify their trade. On the whole it had been a tolerably satisfactory year, and they must not grumble. The letters they had received in answer to their inquiries had nearly all expressed a favourable opinion of their waters.

In regard to the Harrogate litigation, the dispute was still undecided: they had been guided by eminent counsel's

opinion and intended to abide by it.

The branches on the whole showed good results on the year. In consequence of the depression of trade the directors had decided again to take less fees than they were entitled to, in order to keep down expenses as much as pos-

Before he sat down he felt he must draw attention to the large amount (about 6,000l.) due from customers. thought it was not fair that those customers who did not pay for syphons, but really loaned them, and returned them at their convenience, should be charged the same as those who paid for syphons; in this way some practically were getting supplied on much better terms than others; he thought those who were not willing to pay on the syphons should be charged 6d. per day extra. In answer to Mr. Fitch, the chairman said the outstanding 6,000l. due was mainly for syphons, and they were not strong enough to lend syphons.

In answer to Mr. Urwick, he said the bulk of them came back in fair condition. He also said, in reply to the same gentleman, who thought that credit should not be given to customers beyond the amount of their shares, that they had too many 17. shareholders for that. He was not in favour of marking their bottles and syphons with the name of their

Association.

In this matter Mr. Jamieson (Baker Street) said he agreed with the chairman, and thought that the only remedy was that the secretary should call customers' attention to the necessity of conforming to the regulations, even at the risk of losing some; he did not advocate a hard-and-fast rule at

once. When he manufactured mineral waters he found he had to lay out 400%, a year in replacing syphons, though he got regularly paid. Quite lately the butler of a General Officer came to him to be allowed for some syphons he had supplied as long ago as January, He consented on looking to the state of the gallant General's account. Mr. II. Slator, of Larkhall Lane, Clapham, thought chemists might charge

for syphons when sent out.

Mr. Urwiek said he charged for every one, and complained of the unfair competition of those who did not. But Mr. Fitch pays his prompt, he says, and never charges, and don't lose because he keeps proper accounts. Mr. Burdon, of Duke Street, advocated a monthly account and return of any money due on syphons; but to this the Chairman strongly dissented, saying that, though no customer had ever been refused who had asked it as a favour, he should be sorry to make a system of it, and was glad to say it was seldom asked

Mr. Slator thought no such elaim should be allowed until the account was closed.

Mr. Fitch advocated co-operation between shareholders

and non-members.

Mr. R. Griffiths (Slough) said, though he was within twenty miles of London, the carriage came to 20 per cent. on the waters and over 60 on the syphons, and asked if something could not be done for country members. The Chairman, in response, said he could hold out no hopes; they could not continue the free delivery in London, and anything of the sort for the country would be disastrous; he thought it must wreck anybody.

Mr. Slator said many could not compete with the grocers except at a low price. (Mr. Jamicson, "We can never compete with the grocers.")

Mr. Fitch said in his district the grocers gave notice that

no waters were delivered without other articles.

The Chairman did not see how grocers could undersell them, and advised members to be very careful of whom they bought. He thought 3d, a dozen on syphons and 1d, on bottles would pay carriage, in which Mr. Jamieson agreed

On the proposal of the Chairman, seconded by Mr. Fitch, the balance-sheet was adopted nem. con. On the proposal of Mr. Jamieson, seconded by Mr. Burdon, the retiring directors were re-elected, and after complimentary votes to the old board, the secretary, and the managers of the branches, proposed and seconded by Messrs. Fitch, Urwick, and John Holding, the proceedings came to an end.

### THE LATE WALTER WELDON, F.R.S.

VERY interesting biography of Mr. Weldon, whose death A we reported last month, is given in the last number of the Journal of the Society of Chemical Industry. The story told is so remarkable that we reproduce a large part of it. Walter Weldon was the eldest son of a manufacturer at Loughborough, and was born October 31, 1832. After having employed himself for some years in his father's works, he came to London, in the year 1854, and applied himself to literary pursuits. Of the labours and struggles of the following six years there is little to record. That they were sufficiently arduous and anxious we may well believe from our knowing little about them. They brought him neither name nor fame; and a writer who, in six years, shall have aequired in no measurable degree a literary reputation, can searcely be supposed to have discovered prosperity either. Moreover, before coming to London, he had married a young lady of his own age (he was in his twenty-second year), Miss Anne Cotton, of a Derbyshire family. This imprudence, however, was ecrtainly the wisest thing he had yet done, or was perhaps ever to do. Of the sustainment derived in those early days of discouragement and difficulty from the courage, energy, and devotion of his wife he ever loved to speak; and it is only due to her memory-for she, too, has passed awayhere to record it. After acting as a travelling agent for

proposed daily newspaper, to be called The Dial, which was incorporated subsequently with the Morning Star, Mr. Weldon planned and produced a sixpenny monthly journal under the title of Weldon's Register of Facts and Occurrences in Literature, Science, and Art. This was in 1860. Among the contributors of the more purely literary and artistic papers were Mr. Sala, Mr. Edmund Yates, Mr. Tegetmeier, Mr. Hollingshead, Mr. W. M. Rossetti, and others who have since become more or less widely known by their writings.

The Register was continued for some three years, but it may be doubted whether, at any time, it secured commercial success. The price at which it was issued involved the necessity for a very large sale, and this, probably, it never attained. Finally, and fortunately for the world, it had to be abandoned.

Mr. Weldon then directed his attention, by what special inducements at the moment we possess no sufficient knowledge, to the subject of industrial chemistry. Brought up in the tenets of the school of Swedenborg, to which he was ever deeply attached, he had made the acquaintance of Mr. C. T. Hook, the well-known paper manufacturer, of Snodland, near Rochester, who was also a Swedenborgian, and this may possibly have led him to direct his attention to the particular branch of industrial seignee to which, by "cheapening every sheet of paper in the world "-to adopt the words in regard to his work of the eminent French chemist, Dumas-he was to be indebted for his fame as a discoverer and a benefactor of his race.

Colonel Gamble, who first interested himself in Mr. Weldon's experiments, and at whose works in St. Helens the experiments leading to the foundation of the Weldon process were actually wrought out and the process itself was adopted, has kindly supplied the following particulars in a letter:--"I cannot now remember," writes Mr. Gamble, "by whose intervention I first knew Mr. Weldon, but our first meeting was in London, in the latter part of 1866, when he repeated before me, in my bedroom at the Tavistock Hotel, some experiments which he had made on the production of soda by the decomposition of common salt by hydrofluoric acid, and which, I believe, he had patented. My opinion of this process being unfavourable to its success, in the first instance on account of the impracticability of obtaining apparatus capable of resisting the action of the materials, he called my attention to some experiments he had made on the oxidation of protoxide of manganese by blowing air through it whilst suspended in water, by which he thought he had obtained a

" At this time he appears to have been totally unaequainted with quantitative ehemical analysis, or the results to be obtained from it, and I informed him that his process had been worked on a targe scale by Mr. Gossage at Stoke Prior, in Woreestershire, several years before, and with the result of only obtaining a very light sesqui-oxide, which it was found was a very unsatisfactory material to work with in obtaining. chlorine, and the process was therefore abandoned.

"I had a considerable number of experiments made at my laboratory in St. Helens, extending over a long period, most of the time under Mr. Weldon's supervision, when it was discovered that the presence of chloride of calcium and an excess of lime along with the protoxide to be oxidised, was necessary for the production of a higher oxide than sesquioxide. But our experiments did not lead us to what appeared to me a workable process. Some time in 1867 Mr. Weldon discovered the magnesia-manganese process, which he patented, and the experiments upon it, conducted on a manufacturing scale, delayed our progress with the lime process, which we did not get to work for making bleaching powder till some time in 1868, and in the meantime some experiments had been conducted by Mr. Weldon on the Tyne (I believe at the Walker Alkali Works), so it was not until sometime in 1869 that we worked the process on a manufacturing seale."

The foregoing extract from Mr. Gamble's letter may be usefully supplemented by the following, written by Mr. Weldon himself, and extracted from the Newcastle Chronicle of July 5, 1884:—"The first experiment, other than laboratory experiments, with what is now known as 'the Weldon process,' were made at Walker, in the demolished works of the Walker Chemical Company, about the year 1866. After having reached a certain point the experiments at Walker were abandoned for various reasons. They were soon afterwards resumed at the works of Messrs. J. C. Gamble & Sons, at St. Helens, Laucashire, and it was there that the process was

finally worked out."

It will be seen from the foregoing extract from Colonel Gamble's letter how much knowledge as well as experience in theoretical and applied chemistry Mr. Weldon had yet to learn in 1866. The writer has before him a letter dated March 8, 1883, acknowledging the receipt of an address on the subject of instruction in applied ehemistry, in which he (the writer) had unwittingly referred to Mr. Weldon as "a trained chemist," in the ordinary sense of the term. The following is the extract of that letter bearing reference to the matter:—

"I have read with great interest your lecture," writes Mr. Weldon, "report of which you so kindly sent me recently, and I heartily agree with its general argument. But it was a mistake to quote me as an example of a 'trained chemist' I never heard a chemical lecture in my life, though few men were more intimately acquainted with the whole literature of chemistry. I had never entered a chemical laboratory or seen a chemical experiment, when I patented not Weldon's

process as it is but what led to it!"

When, after long and patient working, the inventor had finally succeeded in his efforts, the results accomplished were that the manganese formerly lost was recovered to the extent of 90 to 95 per cent.; the price of bleaching powder was reduced by 6*l*. per ton; its production was quadrupled, and something like 750,000*l*. per annum were added to the national wealth.

This was a notable achievement, and was recognised nowhere more cordially than in France. By the French Government Mr. Weldon was nominated Chevalier of the Legion of Honour, and he received from the Société d'Encouragement its great medal, conferred on only four other persons—Les-

seps, Boussingault, Deville, and Giffard.

Mr. Weldon was a man of prodigious energy and perseverance, coupled with knowledge of the world and capacity for business; and to these qualities was largely due the rapid and successful adoption of his invention. He spared no pains nor neglected any details. Nor was his attention limited to his own invention. He made himself more or less familiar with all branches of chemical industry, and in the alkali trade was regarded as an expert whose judgment was of the highest value.

To his scientific attainments he united singular literary skill; and there was not, perhaps, another man in England who could make a difficult matter so plain to people of ordinary intelligence, and this without the least sacrifice of

accuracy or evasion of detail.

Besides the vast labour and anxieties entailed by the writing, technological researches, &e., involved in the evolution and maintenance of the very numerous patents bearing his name, or taken out jointly with others, Mr. Weldon, nevertheless, kept fully abreast with the advance of the inorganic portion of pure chemical science; and he occasionally contributed papers, which always contained something of original thought, and were always a pleasure to hear or to read. At the meetings of the British Association in Montreal last year he contributed a paper on the "Periodic Law," and quite recently he had published for private circulation a work "On the Ratios, one to another, of the Atomic Weights of the Elements," hearing "The Glosiyum Ferrila".

"The Glucinum Family. Like so many in this strenuous generation, Mr. Weldon suffered from over-work. Never satisfied with what he had done, he entertained larger designs, labouring unremittingly for their development. Continually warned that the strain on his energies was excessive, he held on in weakness as in strength. For a long series of years he had attended the meetings of the British Association, and went to the recent gathering at Aberdeen, but only to discover that he was too unwell to take his accustomed share in the proceedings. He returned to his home, Rede Hall, Burstow, Surrey, on September 16, and on the 18th wrote to a friend that he "had been ordered to do no work on pain of ahnost instant death," adding, with reference to some matters of urgency, "I shall do my best." Two days later his life struggle was over, terminated at the age of 53-a career full of achievement, and with what seemed sure promise of yet greater success.

### Veterinary Pharmacy.

### SWINE FEVER.

THIS highly infectious disease having recently made its appearance in different parts of England, and thereby closed the markets for pigs, it may be well to consider the nature and treatment of what is often a great source of loss and disappointment both to the farmer and cottager. So infectious and fatal is it, that heavy losses are incurred by large owners, and the peasant who suffers the loss of a fat hog is thereby deprived of the "gintleman who pays the rint."

The first symptoms are those of loss of appetite, drowsiness, and disposition to retire into a dark corner of the pound, obstinate constipation, high-coloured urine, redness of the eyes (injected conjunctivæ), stiffness, hurried breathing, dry harsh skin, cold ears and legs. The temperature in health should be about 98° Fahr., and the best mode of ascertaining it is to hold the pig by his hind legs (wheelbarrow fashion) while the clinical thermometer is gently passed into the rectum; in a very slight attack the temperature will be 103° or 104°, and may recover after reaching 105·5°; some few reach 106°, and rapidly run down again, but such a degree of fever is usually fatal. The diagnosis of the disease having been made, the treatment should be directed in the first instance to unload the bowels and call upon the kidneys, and endeavour to keep the surface of the body warm by clean bedding, protection from draught, and hand rubbing to the extremities; the medicine should consist of bold doses of pot. nit., mag. sulph., and flor. sulph., which may be made more active by the addition of carminatives. The following is a suitable mixture, and should be given according to the weight of the swine:-

Pot, nit	 	 	 	3vj.
Flor. sulph.		 	 	3iss.
Mag. sulph.	 	 	 ••	ã⊽.
Theriaca	 • •	 	 	Зij.
Aq	 	 	 ad	žxx.

M. ft. mist.

One oz. of the above mixture may be given for every 2-stone-weight of the pig, and repeated for two or three mornings. The above is not an elegant mixture, but it is effective and cheap; sulph. nig. is less conspicuous when made up, and theriaca assists in holding up the powders—of course, it requires well shaking.

The food should be carefully looked after, and all vegetable refuse withheld; also barley-meal and corn, or anything of a heating kind; thin slops of "middlings," with a dust of fenugreek, is as good as anything, to induce the swine to take which they must not have access to any other fluid, and, if wash of any kind is given, it should not contain salt.

Some practitioners are very fond of oleaginous doses, and there is no doubt that they are of much service; but our experience seems to prove that the temperature is more quickly reduced by salinc matters, and it is the maintenance of a high temperature for any length of time which is the cause of death.

A good mixture of the oily kind will be found in the following:-

Ol. crotonis					• •		mx
Ol. juniperi			••	••	••		3ss.
Ol, ricini	• •	••	••	••	• •	ad	3x.

M. ft. mist.

Dose, from a tablespoonful to 6 oz., calculating about ½ oz. to every 2-stone weight.

It is almost unnecessary to add that thorough disinfection should be resorted to, and this is a most difficult matter in many pig compounds, as only modern and well drained and paved styes can be effectually done, the majority being defective in the roof and rotten inside, and the earth so-saturated with exercta that it is quite impossible to reach the bottom with any disinfectant. Nothing answers the purpose better than carbolic preparations, such as Jeyes' fluid or Calvert's cresol, or any other well-suspended and dilute form of the acid. An ordinary garden watering-pot with the rose on serves as a good distributor.

After the fever has subsided the pigs often remain weak and languid, and suffer from diarrhea, which is best treated with alkaline bicarbonates combined with vegetable tonics. The following is a serviceable mixture:

Sodæ carb.	 	 	 	3 j.
P. gent	 	 	 	ξį.
P. cateeliu	 		 	ξj.
Pulv. cinchonæ	 	 	 	žj.
M. ft. pulv.				

The dose from 3ij. to 3ij., or more, in the food. Or this-

Pot. bica	ırb.				 		5j.
Infus. or					 		āj.
Infas. ca	teclu	C011C,			 		3j.
Aq.,,					 	ad	3×.
M. ft. mist.	Capt.	₹j. to	šiv. bi	s die.			

After the diarrhea has subsided the benefit of tonics is very marked, and the various thriving-powders which are so popular owe their properties chiefly to fenugreek and salt, with the addition frequently of lentil flour.

For diarrhoea, accompanied by a relaxed or irritable condition of the intestines, the Veterinary Pharmacopacia recommends the following:—

Desc for jig, 3ss. to 3ij, as a bolus or mixed with gruel.

The following is a good thriving powder for pigs that are not doing well, or to increase the digestive powers and hasten the fatting process:

Joint ill, joint fellon, or lameness from swollen and painful joints, is of frequent occurrence among young pigs, and may affect them at any age. It is to a large extent hereditary and avoidable; but it often happens that people buy a sow for breeding, and, if they inquire at all about her, it is as to her pedigree and not her hereditary diseases, these being quite as common among the aristocracy of the stye as among crossbred and less valuable animals.

The above lameness has for generations been recognised as a great source of loss and inconvenience, and there are to be found a great variety of remedies more or less useful in the old works on farriery. The successful treatment, however, depends upon a good understanding of its causation. Its pathology closely resembles rheumatic gout in the human subject, and the same causes that produce or aggravate it in the human subject do the like for pigs. Wet, cold, draughty, ill-drained, and comfortless styes more frequently have an inmate with joint fellon than others, and it is more prevalent during the east winds of spring and after the autumn rains than at any other time. There is first stiffness and unwillingness to move, then swollen joints and constipation; great heat and tenderness often accompany this complaint, and a rigidity in some cases that resembles the effects of strychnia.

Treatment.—A brisk aperient of croton oil and castor oil should be first given, and afterwards salicylic acid and soda alternated with colehicum and potash, while local applications are being daily used.

The following mixture will be found highly beneficial:-

	0					-	
Solæ s					 		3iv.
Tinet. colchici					 		Siss.
Spt. ju	niperi				 		5ij.
Aq.					 	ad	3xx.
M. ft. mist.	Capt.	Sij.	to 3i. b	is die.			
Or this-							
	bicarb.				 		Зij.
Vin. co	lchiei				 		3iv.

Siv.

ad Exx.

M. ft. mist. Capt. Jij. ad. Jij. bis die.

To the swollen and tender joints a lotion should first be applied, in order to reduce the inflammatory action, and subsequently an embrocation to excite absorption of the gouty deposit which usually results. The following lotion is admirably adapted to the acute or inflammatory stage:—

After two or three days, when the swelling and pain have somewhat subsided, the joints may be daily rubbed with the following:

Clater, whom we have before quoted as one of the best of the early writers on medicine, long ago recognised this affection as of a rheumatoid nature, and prescribed the following with success:—

Pulv, guaiaci	 	 	 	3).
P. nnisi	 	 	 	Зij.
P. carni	 	 	 	Зij.
P. gran, parad.	 	 	 	Зij.
Tinet, opii	 	 	 	\$ేక
ft, haust.				

This is for the joint ill in cows, and the dose above is to be given in a quart of hot ale or grael to a full-sized beast. The same remedies may with advantage be given to pigs and calves by calculating the proportionate weight of the patients.

Modern practice goes to show that fermented liquors are antagonistic to rheumatism and gout in all its forms, and we should prefer gruel to ale; but it must not be supposed that ale is to be tabooed in cattle practice, as experience proves it extremely valuable in combination with purgatives and cordials, and as a tonic after the exhausting diseases of runniuants.

Swine are affected with other diseases almost peculiar to themselves, of which we shall treat in a future paper.

### TRADE-MARKS APPLIED FOR.

The Trade Marks' Journal publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, Loudon, W.C.

### From the "Trade Marks Journal," October 14, 1885.

LINDA'S "ASPAROGINE," for a chemical substance or combination thereof prepared for use in medicine and pharmacy, and preparations of such chemical substances or combinations thereof; also for use in medicine and pharmacy. R. C. Baker, Eastgate Railway Avenue, Anerley Hill, Surrey. No. 45,524.

RIMMEL'S CARRODENTINE, a new charcoal tooth-soap, with a number of other words in white letters on black ground, for a preparation for the teeth. Engene Rimmel, 96 Strand, W.C. No. 45,710.

VERRUGACINE, for a pharmacentical preparation for cradicating warts and corns. R. D. Hughes, the County Medical Hall, High Street, Denbigh. No. 46,358.

Device of Dome and Anchor, with the words below "Safety with speed," for chemical substances used in manfactures, &c. James Blenkinsop, trading as the "Economic Chemical Company." The Blue House, Allrighton, Salop. No. 46,600.

Designed Label, with representation of "Puss in Boots," and name, for chemical substances used in manufactures, photography, &c. (No. 46,647); the same for candles, common soap, detergents, illuminating, heating, or lubricating oils, matches, starch, blue, and other laundry purposes. No. 46,652. Alfred Liebert, Hamburg, Germany.

- A Daisy and the name of the flower below it, for common soap and other articles required in the laundry. W. H. Holland, 1 Sussex Road, Southcort, No. 46.723.
- An Oval Label, with design bearing name and address of firm, for a crated and unheral waters, and other drinks included under Class 44. William Bannister the younger, trading as "W. Bannister & Co.," Halford Street, Smethwick. No. 46,781.
- HERBAL TONIC, or stockmaster's frieod, for a medicine for lambs, sheep, and calves. Stephen Pettifer, Crudewell, near Malmesbury, Wilts. No. 46.822.
- An Elaborate Design, bearing a number of words, two of which form a semi-circle, "Silver soap"; and below, the name "Fitchett's," for silversmiths' soap. Ell Parker Fitchett, 137 Pershore Street, Birmingham, Warwickshire. No. 46,89€.
- A Pyramil, showing interior, the sides bearing respectively letters "B. O. W.," for common soap and extract of soap (No. 46,962); also same device for perfumed soap. No. 46,963. Edward Cook & Co., East London Soapworks, Bow, E.
- KILLCORN, for an appliention for corns, being a medicinal 'preparation for human use. W. B. Mason, 3 Albion Street, Leeds. No. 47,025.

### From the " Trade Marks Journal," October 21, 1885.

- IMPERIAL LEMONADE, for mineral and acrated waters, natural and artificial including ginger-beer. Henry Symons, trading as "John Symons & Co.," The Plains, Totnes, Devonshire. No. 42,958.
- A Floral Label, bearing the words "Floral foam, or flagrant liquid dentifrice," for n dentifrice. William Day, trading as "Orlino perc et fils," 153 High Street and 8 Calton Road, Sonthampton. No. 43,495.
- An Ornamental Border to an oblong label, and in the centre the words "The queen of table waters," for an acrated water. The Appolinaris Company (Limited), 19 Regent Street, London. No. 45,621.
- A Long Lahel, bearing pictorial representations of mountains, a lake, and a number of words commencing "Pare mountain coffee," for coffee, Evison & Larner, 15 Eastelieap, London. No. 46,022.
- A Shield, bearing words "Anti-contagion, R.S.," for an anti-contagion disinfecting powder. Richard Shillingford, 135 High Street, Guildford, Surrey. No. 46 267.
- An Ornamented Ohlong Label, boaring words "Thank you," and others, for a perfume. James Woolley, Sons & Co., Manchester. No. 46,809.
- A Sultan's Hend and Shoulders, with words below, "The Sultan coffee," for coffee, William Dray, trading as "Wm. Jones, Dray & Co.," 27 Castle Street, Lelcester Square, London. No. 46,835.
- A Horseshoe, for coffee. Samuel Hauson, Son & Barter, 47 Botolph Lanc, Loudon, E.C. No. 47,090.
- A Diamond, bearing upon It a decanter for a rated and mineral waters and other drinks included under Class 44. Joseph Cresswell, trading as "Joseph Cresswell & Co.," Halford Street, Smethwick, near Birmingham. No. 47.092.
- "Beatrice" Feeding-bottle, for feeding-bottles. Thompson, Millard & Co. (Limited), Cartain Road, Great Eastern Street, London. No. 47,109.
- HOPEINE, for a preparation of the narcotic principle of hops for use in medleline and in pharmacy. The Concentrated Produce Company (Limited), 10 and 11 Camonile Street, London, E.C. No. 47,123.

### From the "Trade Marks Journal," October 28, 1885.

- A double lion, for chemical substances used in manufactures, photography, or philosophical research and anti-corrosives (No. 43,743); the same, for chemical substances used for agricultural, horticultural, veterinary, and sanitary purposes (No. 43,744); the same, for chemical substances prepared for use in medicine and pharmacy (No. 43,745); the same, for instruments, apparatus, and contrivances, not medicated, for surgical or curative purposes, men or animals (No. 43,753); the same, for mineral and aërated waters, natural and artificial, including gioger beer (No. 43,786); the same, for candles, common soap, detergents, matches, starch, blue, &c. (No. 46,530); the same, for perfamery (including toilet articles, preparations for the hair and teeth, and perfumed soap) (No. 43,790). Oscar Moenich, trading as "Oscar Moenich & Co.," 8 Coleman Street, E.C.
- The Head of a Fox, for unineral and aërated waters, natural and artificial, including ginger-beer. Barclay Brothers, 21 Norfolk Court, Glasgow. No. 44,211.
- THE NONPARELL, for common soap (No. 44,215); the same, for perfumery (including toilet articles, preparations for the teeth and hair, and perfumed soap), (No. 44,216). Francis Wentraud, 1 to 3 Nicholl Square, Falcon Square, London.

- A Star, with device around borders and in the centre, and over it a crown, and below it the word "Progress," for chemical substances used in manufactures, photography, or philosophical research, not including composition for removing boiler incrustation and compositions used in sizing cotton warps. The United Agencies (Limited), Jeffrey Square, London. No. 44,701.
- An Oblong Label, bearing words "Hydroleine, Harrison's Hydrated Soappowder"; and a smaller label, with device and words "Pure and sweet," for soap-powder for scouring and laundry purposes. F. J. Harrison & Co. (Limited), Watling Street, Leicester. No. 46,098.
- A Circle, and within it three show-bottles, each with a letter -S, L, D, respectively, for chemical substances, not included in Cass I, and used in medicine and pharmacy. The Salad Company (Limited), 3 Savage Gardens, Tower Hill, London. No. 46,251.
- Iwo East Indian Personages, each holding a cup and saucer in their hands and below one the words "Analysed Cocoa," and below the other "Analysed Tea," for occor and tea. Alfred Thorpe, 4 Lombard Court, London, E.C. No. 46,528.
- A Monogram of G. T. S., with device, for mineral and acrated waters George Thwaites, Stockton-ou-Tees. No. 46,834.
- An Oval Lahel, having peach-blossom in centre, and also the words "Peach-blossom," with others, for perfumed soap. Eliot Arthur de Pas, 3 Coleman Street, London, E.C. No. 47,067.
- A Cook laughing, with arms akimbo, for coffee. Samuel Hanson, Son & Barter, 47 Botolph Lane, London, E.C. No. 47,091.
- CODD'S BOTTLER, for glass bottles. Hiram Codd, 41 Gracechurch Street, London. No. 47,106.
- A pictorial representation of leaf-gathering at a tea plantation, and several words, for tea. Davidson & Co., Queenbridge Street, Belfast. No. 47.141.
- HASSALL'S PHOSPHO-CITRIC ACID, a chemical substance used in manufactures of aërated waters. Abner Hassall, No. 1 Warehouse, Great Northern Railway Goods Depôt, King's Cross. No. 47,164.
- Acme, for perfumed soap. Hazlehurst & Sons, Runcorn, Cheshire, No. 47,172.
- CHALLENGE BRAND in steneilled letters, for chemical substances used in mannfacture, photography, and philosophical research, not including lacquers, anti-corrosives, and all other goods of the nature of paint, colours, pigments, ochres, bronzings, compositions, varnishes, and dryers (No. 47,438); the same, for chemical substances used for veterinary, sanitary, agricultural, and horticultural purposes, oils prepared for the same uses (No. 47,439); the same, for chemical substances prepared for use in medicine and pharmacy, oils prepared for the same purposes (No. 47,440); the same, for colours other than mineral, mineral and vegetable oils not included in other classes (No. 47,441); the same, for oils in use as foods (No. 47,446); the same, for oils for toilet purposes (No. 47,448); the same, for brushes not included in other classes (No. 47,449). David Storer & Sons, 5 & 6 Billiter Avenue, London.
- DENTENA, for a cure for usuralgia, face ache, and like affections. Thompson & Co., 23 Broadgate Coventry. No. 47,430.

### From the "Trade Marks Journal," November 11, 1885.

- A Diamond-shaped Label bearing various words, and amongst them "Tectotal Quench, popular sober beverage" for an aërated non-alcoholic drink. John Richardson, Exchange Stores, Harrogate. No. 45,259.
- Nervibrater, for electrical machines for medical or curative purposes. C. B. Harness, 52 Oxford Street, London, W. No. 45,683.
- Three Labels, the chief one bearing a representation of cups of cocoa on a tray and below the words (with others) "Fry's Pure Concentrated Soluble Cocoa," for cocoa. J. S. Fry & Sons, Bristol and London. No 46 802.
- LADY HESELDINE'S FEMALE CONNECTIVE, for a medicine for human use.
  The Heseldine Medicine Company, 38 Frances Street, Battersea, Surrey,
  No. 47.295.
- An Oblong Label with black ground, bearing in white letter a facsimile signature "K. Holt," for medicines for human use. Sarah Eliza Jeffries, trading as "Kate Holt," 63 St. Paul's Churchyard, London No. 47,348.
- Kennedy's Emulsion of Petroleum, for an emulsion of petroleum for human usc. Kennedy & Co., 120 Southampton Row, London, No. 47,505.
- Mrs. S. A. Allen's World's Hair Restorer, for a pharmaceutical preparation for the hair. In use by applicant and predecessors in business upwards of 17 years before August 13, 1875. Selah R. Van Duzer 114 and 116 Southampton Row, Holborn, London.

THE

### BRITISH PHARMACOPŒIA.

THE BRITISH PHARMACOPEIA: ITS AMENDMENTS, ADDITIONS, &c.

By CHAS. UMNEY.

THE revision of a pharmacopæia at certain interva's is a matter of necessity, and the editing of such a work, to include novelties and amended processes, is anything but an easy task.

The publication of a national pharmacopæia is of considerable interest to the medical practitioner, the pharmacist, and

the public.

By the agency of the pharmacopæia the physician communicates his wishes to the dispenser, and the public is enabled, by the formulae set out and the standards adopted in the work, to obtain drugs and preparations of uniform character and composition.

The alterations in such a work as a new British Pharmacopecia must be perplexing to the physician, and of necessity a matter of grave importance to the pharmacist. It is not to be wondered that the latter, from whom the public expect and exact so much, should, on the appearance of such a volume as a new British Pharmacopecia, take an early opportunity of reviewing his position in relation to it, both past, present, and future.

About a quarter of a century since it was decided that one pharmacopecia should be framed for Great Britain and Ireland, and those of us who have been in harness since that period know that, if there has been one subject more than any other upon which labour and thought have been ungrudgingly bestowed, it has been upon the British Pharmacopeia.

We, who have seldom missed an evening meeting here during the eighteen years of the official existence of the last pharmacopecia, can testify that the pharmacist has always been ready to co-operate with the Medical Council, and has ever been aiming to make the British Pharmacopecia a model amongst the Pharmacopecias of other nations.

It is not contemplated to night to review the Pharmacopæia; the wish is rather to eall your attention to some of the leading features of the new work, mentioning where and for what reasons alterations have been made, taking a hurried glance at the new preparations introduced, and then leave it for others to discuss the subjects referred to, and to bring forward at this or subsequent meetings of this session such points as may appear worthy of further experiment or discuss on.

It is hoped that at all times throughout this discussion it may be manifest that our desire is to be loyal to the new Pharmacopæia, and to respect the views of its compilers, and it will not be too much to ask of those gentlemen who represent the Medical Council to give a careful consideration to any statements in reference to any inaccuracy in the British Pharmacopæia which appear to have been the result of mature consideration and experiment.

Pharmacists may also be reminded that it is their bounden duty to notify any discrepancies in this work in the interest of science, of pharmacy, and the public, not forgetting that by a general consensus of opinion in most cases of legal prosecutions this work is taken as a standard of reference, and the characters and tests contained in it are generally those

upon which a judicial decision is based.

If our criticisms and discussions are carried on in the spirit indicated, I am persuaded that on some future occasion, when it is found convenient to publish an addendum to the errata slip now attached to the work, or at that revision of the Pharmacopæia which it is hoped will in future be a decennial one, the editors, whoever they may be, will acknowledge their indebtedness to pharmacists for their criticisms, and invite their co-operation in framing a new Pharmacopæia.

It will be profitable, before reference is made to either the drugs or preparations in the Pharmacopæia, if we note the

changes in the construction of the work.

The method adopted for representing the composition or constitution of chemical substances is very properly arranged

on the modern system of notation, the formulæ under the old style of notation being expunged.

Anyone who has spent half an hour with the new Pharmacopeia can see that its compilers would have been pleased if they could have introduced in the formulae for preparations an entire system of parts by weight both for fluids and solids; as it is they have had to content themselves with doing things piecemeal, and now leave the way paved for more complete alterations on a future occasion.

The partial introduction of this method for setting out the relative quantities of ingredients by supplementing the respective weights and measures by proportional parts is certainly not free from objections. At times the formulæ expressing the solids in parts by weight and the fluids by fluid parts are confusing, and seldom do they convey that information that one can easily take in at a glance on looking through the formulæ of such a work as the Codex.

The editors have shown their wisdom in drawing freely from such foreign pharmacopecias as were distinctly in advance of us, and from none have they with so much advantage taken hints as from the United States Pharmacopecia, and in referring to this latter we should not lose sight of the favourable position in which the editors of the British Pharmacopecia have been placed by the recent revision and publication of the three pharmacopecias of France, Germany, and the United States.

Percolation has been more practised and is better understood in America than here. We all know that much of the success of the process depends upon the proper disintegration of the drug, and for this reason the Americans have been particular when setting out their formula to state the fineness

of powder to be used.

The British Pharmacopæia describes its powders as numbers 20, 40 and 60, some of the coarser being adapted for the percolation of some drugs, and the finer for others. The good begun in the preface does not seem to have been completely carried out in detail, for we find some substances used for tinctures described as "fine powder" (ginger), "coarse powder" (cinnamon), "powder" (cubebs), "finely comminuted" (conium fruit), and so on.

The assay of drugs, with a view of standardising the proportion of their active principles, is introduced for the first time (at any rate to any extent). The importance of this cannot be overrated, and the recognition of the principle is unquestionably one of the leading features of the work, and is a distinct advance, notwithstanding the fact that the details for earrying this into effect are to some extent defective.

The assumption that an extract of a suitable consistence, of proper titrated strength and of fixed weight, can invariably be produced from a constant weight of drug is incorrect. It seems to have been overlooked that an extract which might with accuracy be described as of suitable consistence on one occasion might on the next, from another parcel of drug yielding a different percentage of extractive, be exceedingly soft or exceedingly hard, and not entitled to be styled as an extract.

It will be convenient in dissecting the Pharmacopæia to arrange the subjects for discussion in four sections, taking

the two smallest first.

SECTION I.—Drugs and preparations omitted from the B.P. 1885 that were official in B.P. 1867 and its addendum.

SECTION II.—Drugs and preparations retained unaltered.

SECTION III.—Drugs and preparations retained in B.P. 1885, but strength, character, or tests varied as compared with the B.P. 1867.

SECTION IV.—Drugs and preparations included in B.P. 1885 that were not official in the B.P. 1867 and its addendum.

### SECTION I.

In the list of drugs discarded we find areca, castor, duleamara, tobacco, stramonium leaves, elm bark, &c. Most of these have for years been in small demand, and it has been wise to omit one and all. Why areca, which one would have expected to have found in a book of veterinary formulæ, should have been introduced into the late addendum one never could quite understand.

SUCCUS RHAMNI and its syrup have been wisely rejected, if only for the reason that for years succus rhamni of trade

has been a sham, and the syrup made from it absolutely worthless (Umney, *Pharmaceutical Journal*, July 11, 1874).

MIST. GENTIAN.E was in little demand, and there will be no regret at its omission; it was originally transferred to a former British Pharmaeopeeia from the Edinburgh Pharmacopeeia.

HYDRARG. IODIDUM VIRIDE, or, as it is more properly described in the German Pharmacopeia, IODIDUM FLAVUM, has not been expunged one moment too soon; it was a variable, unreliable, ever-changing preparation, too dangerous to prescribe in the uncertain state in which it was found in trade (*Pharmaceutical Journal*, C. H. Wood, May, 1868).

SODII ACETAS.—The official schedule of "omitted" preparations erroneously includes this salt. While it is no longer used in the preparation of phosphate of iron and its syrup, still it is used as the source of acetic acid in the production of acetic ether.

Iodides of iron and cadmium and moist and magnetic oxides of iron are so seldom required that their presence in the l'harmacopœia was an unnecessary encumbrance.

### SECTION II.

We find about six hundred drugs and preparations that have in no way been varied as compared with previous editions.

Some preparations retained have characters and tests as they were in the last edition, but which ought to have been varied or otherwise described.

Aconiti Radix.—The English and German roots are still official, and there is no recognition of the Japanese root, which has at intervals found its way in large quantities into the London market. Notwithstanding the liniment of aconite is made in the proportion of twenty ounces of root to thirty fluid ounces, we find under aconite root that the proportion is stated as in the previous Pharmaeopæia, viz., 1 in 1.

Belladonne Radix.—The same erroneous statement of strength is made as with aconite, the proportion being stated to be 1 in 1, while it should be 1 part in  $1\frac{1}{2}$  parts.

FERRUM TARTARATUM is now directed to be prepared with an additional 9 per cent. of ferric oxide, while its characters and tests, viz., 30 per cent. of ferric oxide by incineration and subsequent washing, remain precisely as before. This is obviously an error; my impression is that the alteration in the percentage of ferric oxide added and the percentage said to be present after incineration is based upon misconception, having its origin in the variability of commercial cream of tartar in so far as the presence of tartrate of calcium in it is concerned.

Working with fine cream of tartar and adding to each 100 parts 57.5 parts of ferric oxide, the proportions of the British Pharmacopæia, 1867, and also of the Pharmacopæia Lond., 1851, a scaled salt can be made containing 33 per cent. of ferric oxide. The 1867 Pharmacopæia, however, described the scales as yielding 30 per cent. ferric oxide only. Now in the new Pharmacopæia, to each 100 parts of cream of tartar we are directed to add 62.7 parts of ferric oxide, and still the completed product is said to be of the same composition as before. My view is that the addition has been made to the wrong side of the account, for instead of adding to the iron the proportions should not have been varied, and an additional 3 to 4 per cent. might have been added to that already stated to be present after incineration.

Many years since I became aware of the variability of tartrated iron of trade, and recently (Wright, "British Pharmacentical Conference Reports," 1885) it has been shown that the same continues.

It is suggested that instead of using cream of tartar, 80 per cent. of its weight of tartaric acid be substituted, converting it into pure acid tartrate potassium with potassium carbonate, and proceeding otherwise as prescribed in the Pharmacopolia.

FERRI ET QUINLE CITRAS is another preparation in which a slight addition has been made in the formula, but the percentage yield of quinia is described as in the previous edition.

There has been some adverse criticism upon this official iron and quinine citrate. While it is not disputed that scales more elegant in appearance and solubility can be produced

by other formulæ, still the additional  $2\frac{1}{2}$  per cent. of citric acid has converted the British Pharmacopoeia formula, which was defective in this respect, into a recipe that can be worked with good results.

Some twelve years since (Umney, "Citrate of Iron and Quinine," Pharmaceutical Journal, August 30, 1873) it was pointed out that the characters and tests given in the Pharmacopœia were defective, and these have been partially amended in the new edition, but it is certain that 16 per cent. of pure anhydrous quinia cannot be separated from official citrate of iron and quinine, and that sufficient cognisance has not been taken of the fact that 100 parts of quinine sulphate will produce not less than 460 parts of citrate of iron and quinine by the present formula.

If one used absolutely pure quinine sulphate without any adherent water, and converted the same into citrate of iron and quinine and precipitated the quinia by ammonia, and subsequently dissolved in chloroform every trace of alkaloid, calculation will show that 16 per cent. quinia could not be present, but 15.8 per cent. only. Now as all sulphate quinine contains some excess of water, the quantity will actually be less than this, and in practice analysis will indicate about 15 per cent. only.

For confirmation a citrate of iron and quinine was prepared, in which the actual sulphate as such was added without precipitation, and this assayed but 15:1 per cent. Now no quinine was lost here by precipitation.

It is suggested that citrate of iron and quinine should be considered as up to the official standard if anhydrous quinia can be separated therefrom by suitable chemical means in not less proportion than 15 per cent.

SYRUPUS FERRI IODIDI.—This syrup is directed to be prepared of the same strength as formerly. There is an alteration, which in my opinion is both useless and unnecessary, consisting of adding a small quantity of syrup to the ferrous iodide before filtration. The errors in specific gravity and the abnormal density of the syrup are still perpetuated.

Referring to the *Pharmaceutical Journal* ("Syr. Ferri Iodid.," Umney, November 23, 1872), we read, "If the directions of the *Pharmacopaeia* are strictly followed, and the weight of the syrup there ordered be made from *two* ounces of iodine be made up to *two pounds eleven ounces*, then the specific gravity of the syrup will be 1:400, and not 1:385."

If a syrup of 1400 specific gravity be put aside for a few days it will soon be found that the sides of the bottle will be studded with crystals. I have placed several bottles, taken at various times, aside for the purpose of noting the change. In all crystals of sugar well defined, as large as crystals of Glauber salt, can be seen. It is also noteworthy in all these specimens of 1400 specific gravity, in which the crystallisation of sugar has been going on, the upper part of the liquid is tinged with free iodine, whereas in a syrup of the 1385 density placed side by side with the other specimens, no such colour has made its appearance, neither is there the least sign of crystallisation.

It would be well, therefore, to amend the Pharmacopæia directions, thus: "The product should weigh when cold two pounds eleven ounces and three-quarters, and should have the specific gravity 1.385.

It is not a little strange, seeing that the foregoing has been corroborated, that some amendment in the direction indicated has not been made.

### SECTION III.

ACIDUM CARBOLICUM.—The melting point, 33° C., as stated, seems to correspond with the best crystalline acid of trade; the boiling point, however, has been stated somewhat too high, and would, in my opinion, have been put more in accord with trade specimens if 183° to 184° C. had been named. This slight difference, however, is but of little importance.

ACIDUM SULPHUROSUM.—The 1867 edition prescribed a solution of an almost impraticable strength, and named a specific gravity that was not in accord with the percentage strength, and this error was pointed out in the *Pharmaceutical Journal* (Umney, "Sulphurous Acid," March, 1869), and, although controverted at the time, has been subsequently corroborated by Giles and Shearer, whose tables of percentage strength and specific gravity have been published in the

Journal of the Society of Chemical Industry (May, 1885). The 5 per cent. solution ordered is convenient and sufficiently strong for all medicinal purposes.

ETHER ACETICUS.—This appeared in the addendum of the last Pharmacopeia, and was inserted with the object of having a more perfect solvent of the cantharidine in blister flies in making Liquor epispasticus. It was shown (Pharmacoutical Journal, April 4, 1874, Brit. Pharm. Addendum, Umney) that the official acetic other was largely contaminated with free acetic acid, which might be removed by redistillation with carbonate of potassium, and this suggestion has been acted upon.

ALUMEN.—It is well that the authorities have now made official both ammonia and potash alum instead of the ammonia alum ordered in the last Pharmacopæia; the latter did not then represent alum of trade, although formerly it was so.

AQUA LAURO-CERASI.—This preparation, which should have been rejected, has been retained, and a suggestion made in the *Pharmaceutical Journal* ("Cherry-Laurel Water," Umney, February, 1869) adopted, requiring that the water should be standardised so that its percentage of hydrocyanic acid may be uniform.

CINCHON.E RUBRLE CORTEX.—The 1867 edition made official the flat red bark of South America, but the present prescribes red einchona bark in quills. The authorities wisely abstain from saying whether from Ceylon, South America, or other country; they also omit to recognise red bark in shavings, in which form the greater part is now to be met with in commerce. The standard fixed for the amount of total alkaloid is not a very exacting one, 5 to 6 per cent, being the amount named; and the quinine and cinchonidine to be present is to be not less than half of such amount. Unfortunately the authorities do not pursue the matter further and say how much of the quinine and cinchonidine (which are to form at least one-half) is to be quinine. The omission of this requirement is really more serious than it appears on the face of it, for it may be possible to have a bark that shall contain the requisite total alkaloid and the prescribed percentage of quinine and cinchonidine, and still contain only a trace of quinine. Indeed, one bark in intrinsic value may differ from another as much as 50 per cent., and still both may be fairly said to be up to the British Pharmacoporia standard.

EMPLASTRUM PLUMEI—This subject has from time to time been fully discussed. It was shown (Pharmaceutical Journal, Umney, "Lead Plaster," March 6, 1875), that the then official lead plaster was unsatisfactory, and that it differed from all other lead plasters, whether made from the formulae of the old Pharmacopæias of London, Edinburgh, or Dublin, or those of Continental Pharmacopæias, in the larger proportion of oil it contained. The present formula, 2 parts of oil to 1 of litharge, will be found under most circumstances all that can be desired.

EMPLASTRUM BELLADONN.E.—The British Pharmacopæia, 1867, formula was about as impracticable as any recipe ever put into a Pharmacopæia, and it was not long before manufacturers devised means of producing the official plaster by a different process.

The new Pharmacopæia directs that the alcoholic extract

of the root only shall be used.

Gerrard has shown that the extract of leaves contains a larger proportion of alkaloid than that of the root, viz., leaf extract, '449 per cent., and root extract '350 per cent. of atropia. Squibb, of New York, has recently stated that the proportions are almost reversed, and that leaf extract should be '30 per cent., and that of the root '46 per cent.

That the extracts are not greatly dissimilar in alkaloidal value is therefore certain. The pharmacist will still be called upon to supply the green belladonna plaster with which the

public has become familiar.

It is to be regretted that this latter plaster did not find a place in the Pharmacopæia, if for no better reason than that the International Pharmacopæia, contains plaster made from the alcoholic extract of leaves. I would also refer to the fact that this belladonna plaster from root is a powerful preparation, about three times the strength of the plaster recently made official in the International Pharmacopæia, and about double the strength of the 1867 belladonna plaster.

EMPLASTRUM PLUMBI IODIDI.—The soap plaster ordered in 1867 edition has been omitted; it will be remembered that its presence caused the decomposition of the lead iodide, and consequent loss of colour in the plaster.

EXTRACTUM CINCHONE LIQUIDUM.—I do not purpose fully discussing this preparation; one might make a special subject of it for an evening meeting. I will, however, state that notwithstanding the elegant appearance of the new preparation the official process is incomplete and imperfect, if the exhaustion of the bark from which the liquor is made is claimed and aimed at. I cannot do better than give you the results of an operation on a large scale coupled with an assay of the bark.

Original Bark contained in 100 Parts		Same Bark after Use for Fluid Extract contained in 100 Parts
5.182	Total alkaloids	2 282
3.466	Quinine and einchonidine	1.551
1-950	Quinine	0 927

The above analysis clearly indicates that only about 60 per cent, of the alkaloid is dissolved by the official method; in some cases one may obtain more according to the constitution (if one may so apply the term) of the alkaloids of the bark, but in no case is anything approaching complete extraction arrived at.

These experiments corroborate those published (*Pharma-ceutical Journal*, May, 1884, Cownley), and seem to accord with Paul's views given at an evening meeting here.

ENTRACTUM ERGOTÆ LIQUIDUM.—The process now official is one that manufacturers have used for years instead of that of the British Pharmacopæia, 1867.

Nowithstanding the opinions held by some that the fixed oil of ergot is not absolutely inert, there can be but little doubt that the active principle of ergot is mainly soluble in water. The treatment of the ergot by ether previous to the aqueous infusion was wasteful and useless.

It is to be regretted that having departed from the use of 50 per cent. of spirit of wine for preserving the extract, 25 per cent. (Umney, *Pharmaceutical Journal*, September 14, 1878) has not been adopted, rather than 37 per cent. as now official, which is both unnecessary and wasteful.

EXTRACTUM GLYCYRRHIZE LIQUIDUM.—The only change made in this preparation is an increase in the proportion of spirit, which is now 14 per cent. instead of 11 per cent. That some alteration in this direction was necessary, was pointed out in a review of the Pharmacopoxia Addendum (Umney, Pharmaccutial Journal, April 4, 1874 and December 5, 1874).

EXTRACTUM NUCLS VOMICE.—For years past leading pharmacists have been urging that for the more exact administration of potent remedies it was imperative that many drugs should be standardised. The assay of nux vomica of trade and the preparation and assay of the extract formed the subject of a communication to this Society (*Pharmaceutical Journal*, Dunstan and Short, p. 621, February 9, 1884).

The spirit now used for the exhaustion of the drug is 897 specific gravity (about 60 per cent. alcohol), instead of 838 (or 84 per cent. alcohol) as formerly, and is better adapted under all circumstances than a stronger spirit.

EXTRACTUM OPH.—We are directed to take opium in powder for the production of solid extract, or, in other words, we are to drive the water ont of crude opium and reduce it to powder, and then put water to it again to make an extract.

The Pharmacopæia assumes that 50 per cent. only of extract is yielded by powdered opium; there are, however, manufacturers in England who obtain 48 to 52 per cent. from crude opium, and in America the same is not uncommon, for the U.S. Pharmacopæia says 100 parts opium dried at 105° C., treated with cold water and evaporated to dryurss (not an extract), should weigh 55 to 60 parts; and this quite accords with my own experience.

What, then, are we to do with our official standardised

extract of opium, which is perfectly hard, and sufficiently dry to powder? I would suggest a very simple but radical alteration—viz. for the word powdered opium read opium—and this will make the remaining portion of the text as nearly accurate as possible. The extract of 50 parts made from 100 parts of crude opium will then be of a suitable consistence, and contain about 20 per cent, of morphine.

EXTRACTUM PAREIR.E LIQUIDUM.—This preparation is about three times stronger than the corresponding preparation of the British Pharmacopæia, 1867. One can hardly approve of dissolving the solid extract to make the fluid extract, when the liquid extract could have been made as easily in the first instance of a corresponding strength.

EXTRACTUM SARS.E LIQUIDUM.—This preparation is so unlike anything that has previously been in vogne, one is unable to guess whether it will be appreciated. The process is not a desirable one, and is certainly for the exhaustion of sarsaparilla most wasteful. The proportion of sarsaparilla in a given volume of the 1867 fluid extract is about double that in the present official liquid extract.

FERRI AMMONLE CITRAS.—The proportion of ferric oxide now directed to be added is 25 per cent, more than the B.P. 1867 directed. It has been shown (Umney, Pharmaccutical Journal, Dec. 13, 1873) that the official scales did not correspond to those ordinarily found in trade, and that instead of 27 per cent, of ferric oxide being present 31 to 32 per cent, was met with. Accordingly the official standard has been raised to 30 per cent.; but this would have been better stated at the maximum, viz. 32 per cent.

LINI FARINI.—It will be noted that under this name the Pharmacopæia describes the linseed in a state of powder. This must not be confounded with the farina lini of the B.P. 1867, which was a powder prepared from linseed cake, from which the oil had been previously expressed. The selection of this name for the crushed linseed of trade is unfortunate, and will lead to much misunderstanding; and the question arises whether crushed linseed can with accuracy be described as "linseed reduced to powder," in the ordinary acceptance of the term as used by pharmacists.

LINIMENTUM BELLADONNE. — The proportion of root ordered in the last Pharmacopæia was 20 oz. to a completed percolate of 1 pint, or 1 in 1 fluid; in the new edition the proportions are 1 in 1}. This alteration in strength has presumably been brought about by results published in the Pharmaceutical Journal (Umney "Liniment Belladonne," October 10, 1874), which showed that only about 40 per cent. of the extractive was obtained when the percolate was of strength 1 in 1. The strength should have been one of root in two of liniment; such a preparation would have been nearly as strong as now, and not wasteful in its production, or, seeing that we have alcoholic extract of belladonna root in the Pharmacopæia, the suggestion of making the liniment from 1 part of this extract and 10 of spirit might have been worth considering.

LIQUOR BISMUTHI.—The present solution is an elegant preparation, and is practically the same as that described in the *Phamaceutical Journal* (C. H. Wood, September 16, 1871), which process most manufacturers have followed for years.

LIQUOR EPISPASTICUS. The improvement in this preparation is due to the superior solvent power of acetic ether as compared with the mixture of acetic acid and ether, as ordered in B.P., 1867. It is a question if it would not have been better to have kept to the original strength of cantharides, and thus have made the preparation beyond suspicion as a rapid vesicant.

LIQUOR FERRI PERCHLORIDI FORTIOR.—Looking to the text, it might (and I know that it has been) thought that the proportions had been considerably varied; this, however, is not so, the excess of iron ordered is merely to ensure saturation of the acid before the remainder of the acids are added to effect complete oxidation: the specific gravity stated is correct.\*

LIQUOR AMMONII ACETATIS.—Referring to the British Pharmacopæia, 1867, and comparing it with the present edition, it would appear that the intention of the authors has been to reproduce the liquor ammoniae acetatis of the last

Pharmacopooia, but instead of preparing it in the dilute form, the preparation is to be made from liquor ammonii acetatis fortior.

The 1867 edition gave no specific gravity of the dilute solution, but same is substantially correct, for it also appears in the London Pharmacopæia, 1851.

I do not purpose referring to the stronger solution of acetate of ammonia until we come to Section IV., comprising the new preparations.

LIQUORS OF ARSENIC, ATROPIA, MORPHIA, STRYCHNIA, ETC.—The alteration of the strength of this class of preparation from 2 grains to the drachm to 1 per cent., although inconvenient for a time, will in the end be advantageous to the prescriber and dispenser, and when both have become thoroughly accustomed to the change, the wonder will be how and why they for so long refused to count and calculate like modern people.

LIQUOR MAGNESH CARBONATIS.—The strength now prescribed is but 10 grains of the official carbonate to the fl. oz., while in the former Pharmacopaia it was 13 grains to the oz. This change is in accordance with the suggestion made fourteen years since, when a paper was read at one of the evening nectings of this society ("Liq. Magnesia Carbonatis," Pharmacoutical Journal, February, 1870, Umney), showing the solubility of carbonate of magnesia in water impregnated with carbonic acid under a pressure of one to twenty atmospheres. The pressure of three atmospheres then recommended is the one adopted. There is no reason why the fluid magnesia of trade should not closely correspond to the B.P. strength.

LIQUOR PLUMBI SUBACETATIS.—The process and proportions for its preparation are identical with those previously employed; but the specific gravity has been named as 1275 instead of 1260. The necessity of this amendment was pointed out in the *Pharmaccutical Journal* ("Specific Gravity of Liquids of B.P., 1867," Umney, November, 1872).

LIQUOR SODE CHLORINATE.—The official process will give a solution containing  $2\frac{1}{2}$  per cent, of available chlorine, and a solution prepared by the process indicated will closely correspond to the solution of trade.

The 1867 Pharmacopæia was entirely in error in the instructions it gave and in the percentage of available chlorine it named as being present, as well as in the specific gravity of the liquid; in short, its whole statement was erroneous, as shown in the *Pharmaceutical Journal* ("Liq. Sodæ Chloratæ," November 23, 1872, Umney).

LITHII CITRAS.—The Pharmacopæia now orders crystalline citrate instead of the anhydrous powder prescribed in the last edition, but which, notwithstanding, was seldom if ever found in pharmacy.

When citrate of lithium was introduced into medicine thirty years ago it was met with in a crystalline form, but when the salt was first made official in 1864 Pharmacopocia the compilers of that work thought that the crystalline salt was of a deliquescent character, and ordered the anhydrous salt, and the authorities of 1867 edition accepted this statement as correct. It was shown (Pharmaceutical Journal, "Citrate of Lithium," Umney, September 11, 1875) that the citrate of lithium of pharmacy was only from 75 to 85 per cent. of the value required by the Pharmacopocia, and it was suggested that crystalline citrate of lithium should be the future official salt, and this suggestion has been adopted.

There is one query alluded to in the paper referred to, which has not been cleared up, and it is this. The official proportions are given as:—

			Parts
Lithium carbonate	 	 	 100
Citric acid	 	 	 180

Now, neither in theory or practice are these proportions found correct. They should be as under:—

				Treres
Lithium carbo	mate	 	 ••	 100
Citric acid		 	 	 189

It is preferable to convert the residue after calcination into sulphate, and weigh as such, as directed under carbonate of lithium, rather than weigh as the white residue (carbonate) mentioned.

OLEUM PHOSPHORATUM. — This solution of phosphorus

Comment was made on the error of 1.338 for 1.445 in, B.P., 1867.

was first official in the Addendum to the late Pharmacopæia, in which the strength was 0.75 per cent.; the strength of the present phosphorated oil is one-third stronger than formerly, and contains 1 per cent.

OPIUM.—It is permitted to use for the production of the alkaloids of opium any commercial variety, but for pharmaceutical purposes we are restricted to Asia Minor opium. It is prescribed that in powdered opium, dried at 212° F., there shall be not less than 9½ per cent. nor more than 10½ per cent. of morphine present. Now, it is seldom that one has to complain of too low a standard, while the reverse has often to be objected to on account of impractibility or even impossibility. With opium powder a serious error in judgment has been made, which will have the effect of attracting to this country inferior opium which would not be permitted to enter other countries in which a higher standard is recognised.

In the U.S. Pharmacopæia it is stated that powdered opium must contain not less than 12 and not more than 16 per cent. of morphine. The French Codex limit is 11.5 to 13.5, or rather its equivalent in crude opium, viz., 10 to 12 per cent. (16 per cent. being the average difference between crude and

dry opium).

The question arises, What is to be done with powdered opium, which when tested, contains over the B.P. percentage

of morphine?

Let it not be supposed that a phantom is to be raised to show how it may be disposed of, for 1 have been confronted since the publication of the Pharmacopæia, and while engaged in standardising drugs, with a stock of powdered opium containing 12.68 per cent. morphine, and the same difficulty has presented itself to others.

"Are we," said a leading wholesale druggist, "who have always been proud of our powdered opium, having secured the finest that money could purchase, now to buy some rubbish specially to mix with it, or are we to find some harmless diluent to bring down the morphine from 14 per cent., which we find it contains, to 10 per cent, as the l'harmacopæia

directs?"

I need hardly say that, notwithstanding my loyalty to the Pharmacopæia, I advised that, at any rate for the present, it would be best to leave matters as they were, for nothing would make me believe that either medical men or pharmacists would endorse the dilution of powdered opium rich in alkaloid with opium marc or some such harmless diluent as sugar of milk.

PILULA COLOGYNTH. COMPOSITA.—The much discussed question as to the superiority of natural seammony over resin scammony extracted from the root by alcohol seems at last to have been disposed of by the use of the manufactured resin instead of the gum resin popularly known as virgin scammony.

Pulvis Glycyrrinize Composities.—The substitution of the formula of the German Pharmacopæia for that official in the last Pharmacopæia seems in no small degree to have been brought about by the public, who looked upon the powder last official as an abomination, and adopted the German powder as a household medicine; this preference, moreover, was endorsed by the medical profession.

SCAMMONIUM.—At last we find the authorities retreating from the position they took up in reference to the percentage of resin in natural scammony, as the high standard of 80 per cent. named in the former Pharmacopeia gave rise on more than one occasion to vexatious proceedings. The amount of 75 per cent. now adopted is fair, and from scammony of such strength there should be no difficulty, when the gum resin is dried and powdered, in finding fully 80 per cent. of resin soluble in ether.

SODII CITRO-TARTRAS EFFERVESCENS. — The granular offervescing salt in the last Pharmacopæia was alkaline and therefore unpalatable, while that now ordered is slightly acid, and hence grateful; the addition of the sugar has completed the recipe, and produced a granular salt similar to that known with the public as "citrate of magnesia."

SPIRITUS ETHERIS NITROSI.—The process is identical with that of the previous edition, and the production of a spirit of hyponitrous ether by the official process (so arranged as to be applicable on a large scale) that will contain the named percentage of ethyl nitrite is a matter of ease. The new edition, however, contains under characters and tests one

erroneous statement, viz. that the specific gravity is from 840° to 845°, while the 1867 work stated the specific gravity to be 845°.

My experience, gained from the distillations of many hundreds of pounds annually, is that the accurate mean specific gravity is '846; but this new departure making '845 to '840 needs no experiment and but little thought to show it is erroneous. The alcohol is '838 as a starting point, and with it we distil acids and produce, amongst other bodies, ethyl nitrite which has a specific gravity of '947. How, then, can the specific gravity be so near to '838 as '840 is ?

Of course, one can easily make the specific gravity 840 by communing the distillation with spirit of 90 instead of 84

per cent. of alcohol.

SPIRIT. AMMONIE AROMATICUS.—The revisers of the Pharmacopæia have varied the process for the production of sal volatile, acting upon published researches ("Spit. Ammon Aromat." Thresh, *Pharmaceutical Journal*, February 18 and 24, 1883). The composition of the sal volatile and the ease with which the solution is produced are evidently the attractive features in the process.

The specific gravity of this preparation has already been questioned by correspondents (*Pharmaceutical Journal*, September 26, 1885, Conroy), some naming the observed specific gravity as about 900. That the Pharmacopæia is in slight error there can be no question, and that 893 would be nearer accuracy than 886 there can be but little doubt, the error arising in the quantity of the second distillate being too much, in the proportion of about  $2\frac{1}{2}$  of the volume of completed product.

STRUPUS FERRI PHOSPHATIS. — This syrup has been retained in the Pharmacopœia with its proportion of so-called ferrous phosphate unaltered, or, to be more correct, the quantities of ferrous sulphate and phosphate of soda remain the same, but the process of precipitation is so varied that the whole, or nearly the whole, of the iron ordered is thrown down as ferrous phosphate, whereas, following the B.P. 1867 directions, only about 60 per cent. was so precipitated, the remainder being either ferric phosphate or carried away in the mother-liquor.

The use of bicarbonate of soda instead of acetate of soda is the alteration officially made, and has evidently been adopted from suggestions made by Howie (*Pharm. Journ.*, August 8, 1876). It seems strange that, having taken to the use of concentrated phosphoric acid, the sugar was not made into a syrup with boiling water, to which when cold, before crystallisation had the chance of taking place, the concentrated liquor of phosphate of iron could have been added.

It is not a little strange that the excellent suggestion (*Pharm. Journ.*, p. 541, 1874, II. W. Jones), which consisted in dissolving metallic iron in phosphoric acid has not been more generally adopted.

TINCTURA CINCHON.E.—Both the simple and compound tinetures of bark are to be made from red bark, the calisaya bark in the former and pale cinchona (Condaminea) in the latter being no longer employed. The wisdom of this change cannot be questioned on account of the utter worthlessness of late years of most of the so-called flat ealisaya bark. The exhaustion of the red bark, as one might have expected, is as incomplete with red as with calisaya bark; a red bark assaying 5·182 per cent. total alkaloid gave a tincture containing 74 per cent. only of the original alkaloid, the mare yielding 26 per cent. of the alkaloid originally present undissolved.

TINCTURA CINNAMOMI.—Now made with rectified spirit. The instructions to make up measure with proof instead of rectified spirit being an error.

TINCTURA FERRI ACETATIS.—The tincture made with solution of acetate of iron will be a great improvement upon that made by the B.P. 1867 process, which was a most unsatisfactory preparation.

TINCTURA FERRI PERCHLORIDI.—It is satisfactory to find that the tincture of iron is now made to contain 25 instead of 75 per cent. of rectified spirit. Its use in former Pharmacopæias aided decomposition and wasted money.

TINCTURA KINO.—The pectinisation of former tinctures of kino has been notorious. It is hoped that the present formula, containing 20 per cent. of glycerine, will rid us of this dofect.

TINCTURA NUCLS VOMICE.—Now made from standardised extract, 133 grains to 1 pint, the extract being dissolved in 4 ounces of water, and the product made to measure with reetified spirit 1 pint.

TINCTURA OPH.—This tincture is now to be standardised, and the assay 0.75 per cent, of morphine an equivalent of 3.3 grains to the fluid ounce.

TINCTURA QUININ.E.—It has been shown that the deposit formed in tincture of quinine made from sulphate is chiefly sulphate of lime, arising from a combination of the acid of the quinine with the lime present in the tincture of orange peel. The substitution, therefore, of hydrochlorate should prevent the formation of the objectionable precipitate in tincture quinine.

VINUM IPECACUANHE.—It has long since been shown that an appropriate solvent of emetina was acetic acid, and every pharmacist knew how unreliable at times, and how unsightly always, was the wine formerly official. A working formula has been published (*Pharm. Journ.*, September 25, 1880, Barnes), which has been adopted. Exception should, however, be taken to the instruction "powder the residue." This seems not only to be unnecessary, but with difficulty practicable; a powder can be produced, which is exceedingly hygroseopic.

#### SECTION IV.

ACIDUM HYDROBROMICUM DILUTUM.—This acid was formerly prepared by a formula given by Dr. Fothergill, which consisted of decomposing potassium bromide by tartaric acid. While the acid thus produced was sufficiently pure for medicinal purposes, the presence of acid tartrate of potassium and its occasional crystallisation on the sides of bottles suggested impurity, which it was found necessary at times to explain away: the present official acid is much stronger than Fothergill's, more stable, and is identical with the acid of the United States Pharmacopacia.

ACIDUM LACTICUM is ordered in two forms, the syrupy acid for the preparation of calcium lactate and other syrups; the dilute for medicinal or dietetic purposes.

The description of the stronger acid as a "colourless syrupy acid" is, as far as I have observed, incorrect; to have described it as of pale yellowish colour would have been more strictly accurate.

ACIDUM OLEICUM.—The introduction of this acid was absolutely necessary in order to bring the Pharmacoparia up to modern requirements. Its combination with morphine quinine and its probable utility in medicine was noticed nearly a quarter of a century since (Pharm. Journ., Feb. 4, 1863, Attfield). Many oleates have in the meantime been introduced, including those lately brought forward in America by Shoemaker (Pharm. Journ., (abstract), October 14, 1882, Shoemaker), and commented upon by Bird (Pharm. Journ., January, 1885) and Parsons (Pharm. Journ., February, 1885). Probably we may find a better source of supply of oleic acid than the candle-works, as the substance is now in some demand; certainly, the oleic acid of trade does not correspond to the official characters "odourless, tasteless, and nearly colourless."

ACIDUM PHOSPHORICUM CONCENTRATUM.—The introduction of an acid of a specific gravity of 1.500 (or of some strong acid) was in order to countenance the use of the stronger phosphoric acids for making the various phosphate syrups that are now so largely used.

While one can quite understand why the so-called "Parrish's syrup" should not find a place in our Pharmacopæia, it is difficult to see why the same Pharmacopæia should make official the tinct. chloroformi et morphine ("chlorodyne"),

sodii citro-tartras effervescens ("citrate of magnesia").

It is the recorded opinion of the Chairman of the Pharmacopeia Committee that much damage is done to the advance of therapeutics by the previling practice of prescribing "ready-made physic." This advice should have been followed, and chlorodyne and such nostrums kept out of the Pharmacopeia.

CAFFEINE CITEAS.—Little if any of the caffeine of trade is made in England; most of it in Germany. It is not a little strange that the editors of the Pharmacopæia have introduced both caffeine and the compound which has been

described, and for which a formula has been given—viz. citrate of caffeine. A reference to the researches \* of German chemists, published, show that the true citrate of caffeine does not exist.

Translating from the German, we read that "It has hitherto been undecided whether a union between citric acid and caffeine exists or not. Lloyd has found that it is impossible to unite the two bodies with each other in aqueous or alcoholic solution. If the supposed compound of caffeine and citric is treated with chloroform the caffeine passes into solution and the citric acid remains."

"Many of the salts of caffcine described in therapeutical works do not exist. Those which really exist cannot be made use of, because at the moment of their solution they break up into acid and caffeine."

"The preparation called 'caffein citricum' is only a mixture of caffeine and citric acid.

Both the Codex and United States Pharmacopoeia make eaffcine official, but do not introduce the so-called citrate.

It would therefore appear citrate of caffeine should not have been introduced into the Pharmacopeia. It is suggested that if any definite compound of caffeine be required it would be best to use the sulphate, which is stable and crystallizes in a well-defined form.

CHRYSAROBINUM.—The description officially given is at variance with that we have previously applied to goa powder. We are told that the drug is the medullary matters of the stem and branches of Andira araroba (synonym, goa powder), and that it contains more or less chrysophanic acid according to the age and condition, whereas the United States Pharmacopæia describes chrysarobinum as "a mixture" of proximate principles (commonly misnamed chrysophanic acid) extracted from goa powder.

The description of the drug certainly does not correspond with commercial specimens of goa powder, but rather with chrysarobin itself. It is stated to be of a light brown colour, minutely crystalline, tasteless and inodorous. "Under the microscope," writes Greenish (*Pharm. Journal*, April 10, 1880), "araroba presents the characteristics of an amorphous powder."

The following would more accurately describe the drug, and remove some of the confusion which seems to exist:—

"Goa powder or chrysarobin yielding chrysophan on treating with benzole, which is rapidly converted into chrysophanic acid on oxidation."

Trade specimens are not to be met with answering the B.P. tests. I have ten from the leading wholesale drug houses of London, and not one in any way answers the characters and tests.

Collodium Vesicans.—As this is now directed to be made from blistering fluid, it is of importance that the pyroxylin to be added should be of a certain type, for the forms of gun-cotton that were well adapted for the preparation of the blistering collodium when the basis was ether only are no longer admissable. On account of several inquiries reaching me as to whether I had not found the official formula produce a collodion much too thick, specimens of pyroxylin were purchased throughout London. Those supplied were chiefly the gun-cottons used for making photographic collodions. Only one specimen that would produce collodion vesicans of a suitable thickness eould be obtained.

A further examination of the official process proved that the pyroxylin of the Pharmacopæia would produce a suitable collodion if the instructions for its preparation were strictly adhered to. Allusion to this matter is made to remove any doubt or throw light upon the difficulties others may have had. Will it not be found that this cantharides preparation is too weak to produce certain and rapid vesication?

EXTRACTUM BELLADONNÆ ALCOHOLICUM.—This extract was alluded to when speaking of the liniment and plaster of belladonna. It is yielded in varying proportions by different parcels of belladonna root; inferior root will yield 12½ per cent. of extract, fine dry root not less than 15 per cent., and upwards. Again, it is urged, for economy's sake, that the solution of this extract, and also that of aconite root, in spirit

<sup>\*</sup> Archiv. der Pharmacie, 1881, page 458; 1882, page 712; Tanret and Bidermann, 1883, page 175; Schmidt; Hager, Pharmaceutische Central Hulle, 1881, page 152.

of wine for the production of the liniments of belladonna and aconite may be adopted.

EXTRACTUM RHAMNI FRANGULE.—The solid extract of this bark, as well as that of rhamnus purshiana is made by alcohol, the corresponding fluid extracts are made by aqueous deeoction, concentration, and preservation with 25 per cent. of rectified spirit (Pharmaceutical Journal, July 11, 1874,

EXTRACTUM TARAXACI LIQUIDUM.—Although by far the greater proportion of taraxaeum consumed is in the form of succus, still manufacturers have produced from other formulae fluid preparations of taraxaeum root, of which one fluid part contained one of the dry root. A process commonly resorted to was cold aqueous infusion in a limited quantity of water, pressing out the infusion, raising the liquor to the boilingpoint (the first part of the process, in fact, for extractum glycyrrhize liquidum), and evaporating by a water-bath and preserving with 25 per cent. of spirit of wine.

This fluid extract, although elegant in appearance, certainly did not possess the bitter flavour of taraxacine (or whatever the principle may be) which is present in the new

official extract.

LIQUOR AMMONII ACETATIS FORTIOR.—The concentrated solution of acetate of ammonia was not ordered in the last Pharmacopeeia. In the first British Pharmacopeeia, Lowever, a solution of acetate of ammonia was official, of similar strength to the present, but it was made from liquid ammonia and acetic acid, and did not find favour, for it invariably had an empyrenmatic odonr, presumably from the use of imperfectly purified ammoniacal salts in the production of the liquid ammonia.

There is an error in the text of the new Pharmacopacia, and more than one correspondent in the Pharmaceutical Journal during the past few weeks has alluded to same (Brown, Conroy, Naylor, &c.). Let us trace the origin and extent of the error, and show how, with a minimum of

alteration, it can be put right.
Dilute solution of acetate of ammonia (Mindererus spirit) has been official for half a century

If we refer to the last British Pharmaeol a ia we find the

This solution when completed will measure 61 fluid ounces. It would seem that the present Plarmacopeeia authorities, in making a solution of five times the foregoing strength, failed to determine the quantity of liquid produced in making the dilute solution by the foregoing directions.

The present official formula for the concentrated solution is evidently intended to be five times the strength of the solution in the last Pharmaeopecia; it reads thus:-

> Carbonate ammonium

The quantity of earbonate of ammonium ordered, however, viz.  $17\frac{1}{2}$  oz., will require 55 fl. oz. of acetic acid for complete saturation, and the final measure, without any water added, will be 623 oz., which is in excess of the prescribed measure by 13 oz.

The source of the error in framing this formula has been in not taking the acctic acid first and adding to it the ear-

bonate ammonia.

Surely it cannot be held that carbonate of ammonia, indefinite and changing as it is, can be compared with acetic acid as a starting point.

The better way out of the difficulty will be to adopt the following formula:-

> Acetic acid .. 50 fl. oz.

Take-

Add the carbonate ammonium to the acctic acid until a neutral solution results (measure, 543 oz.), then add water until the product measures 61 fl. oz.

The specific gravity will be about 1.070, but this will vary slightly according to the volume of carbonic acid left in the solution.

LIQUOR AMMONII CITRATIS FORTIOR.—This concentrated preparation has evidently been intended for a convenience, but in the form in which it appears it will be hindrance to the rapid production of the dilute solution. If the solution be made by the formula indicated, the specific gravity will not be 1 209 as stated, but 1 243. Moreover, the solution is much too concentrated, for citrate ammonia rapidly crystallises from the solution. This has been referred to in Pharmaceutical Journal (Naylor, Oct. 3, 1875).

LIQUOR FERRI DIALYSATUS.—Considering the adverse criticism to which this preparation has been subjected by therapeutists, it is surprising that we find it in the Pharmacopwia. Neither the French, German, or United States Pharmaeopæia make it official.

The strength of the solution is that recently proposed (Braithwaite, Pharm. Journal, March 7, 1885), viz. 5 per

cent, of ferric oxide.

It is unfortunate that there should have been a typographical error in stating the specific gravity, which is put at 1.407 instead of 1.047.

OLDUM EUCALYPTI.—This oil is now used in considerable quantities for antiseptic and other purposes. At the recent Pharmaceutical Conference at Aberdeen a paper was read on the subject (Pharm. Journ., Sept. 26, 1885, MacEwan), and from the discussion it was quite clear that there were inferior oils in trade.

The finest oil is the product of Eucalyptus amygdalinus.

PARAFFINUM DURUM,-The use of this body for the preparation of ointment will, beyond doubt, find favour. The Pharmacopæia gives a considerable latitude in the melting point, which is named as 110 to 145°.

An ointment made with a paraffin melting at 110° must be appreciably softer than a corresponding ointment made with

paraflin at 145°

It was not wise to give so great a margin, if only for the reason that a parathin with a melting point of 126° commands but half the price of one melting at 142°, this latter temperature representing the highest melting-points of best trade samples,

PARAFFINUM MOLLE.-Since Moss, in 1875, and Martindale and Gerrard subsequently, pointed out that this substance might, with advantage, be u-cd as a basis for ointment, the body has come into general use.

Most of that supplied to this country is from America, a little from Germany. The Pharmacopæia tells us that in commerce it is known by "various fanciful names."

This statement would have been more accurate if it had said that the soft paraffin described in its text, in so far as its melting point was concerned, was known by one fanciful name.

Samples of parafinnm molle as met with in trade are found to have a melting point of 104° to 119°, and in no case can one find a petrolatum of 95°, as described in the B.P., except in the one with the faneiful name. It is unfortunate that the official paraflinum mode has not been made to agree with good trade samples as imported direct from America. The description in the United States Pharmacopæia praetically agrees with samples met with in trade here, viz. 104° to 125° melting point.

TINCT. CHLOROFORMI ET MORPHINE.—The introduction of this nostrum into the Pharmacopæia to represent chlorodync is of questionable advantage, and more especially as itdoes not correspond to the preparation it is intended to represent.

When asked during the past two months for an opinion on the new Pharmacopæia, I have generally pleaded that I had not had a full opportunity of becoming acquainted with its details.

I can hardly say, however, after having placed the subject before you this evening, that I have not spent some time, at any rate, and have not had some opportunity of mastering the details and coming to a definite conclusion on the subject.

I am of opinion that the editors have throughout the work shown a desire to set out the formulæ, and make the arrangement of the book generally in accordance with the

equirements of the age, and that they would have done erfectly that which they have now only partially attempted ad they not been beset with difficulties, such as must of eeessity have arisen when the opinions of various represenative bodies have to be weighed, and the conflicting views of Ingland, Scotland and Ireland taken into account.

The rejection of remedies fallen into disuse has been arried out discreetly. No one can accuse the compilers of ny radical changes in this direction, although some may erhaps think the pruning-knife might not have been used so

paringly.

The amendments that have been made in order to modify, r entirely remodel, the manufacture of certain preparations, r vary the characters and tests of others consequent upon xperiments made and published since the issue of the last work, have been considerable; and although in some few ases these alterations seem incomplete, still a comparison of he two Pharmaeopecias will show that there has been a lesire to arrive at facts whenever and wherever practicable.

The introduction of the many new remedies, both chemical and galenical, seems, on the whole, to have been done with liserction, and there can be but little doubt the majority have been tested therapeutically and proved of value. Of course there will have been some omissions, but these can ind a place in some "extra" pharmacopæia, and a further period of probation given them.

I am much pleased with the recognition, even although neompletely done, of the description of the disintegration of drugs suitable for certain pharmaceutical operations.

I am disappointed, on the other hand, with the attempt to adopt standards for certain drngs and preparations based ipon assay; the result I consider a partial failure, and likely to lead to misunderstanding and mischief.

Viewing the work as a whole, I am persuaded it is in every way quite up to the standard of its predecessor, and in many espects its superior, but its editing in its weakest parts

shows too great deference to antiquated notions.

This rapid, partial, and imperfect survey of the British Pharmaeopæia was undertaken with the object of opening up the subject of Pharmacopacia discussions for this and subsequent meetings of this session, and it will be disappointing if on any oceasion during the next few months there is a lack of contributions and discussions for these evening meet-

ings. I would recommend the Pharmacopecia especially to those who are preparing for the higher examinations of this Society, as a work in which subjects suitable for investigation abound, and I look forward to the time when one of the test qualifications for the Major examination shall be the production of a thesis upon some subject connected therewith. I also hope that pharmaeists will not neglect this opportunity of research, and will make not only their information known, but convert their knowledge into power.

It is by this means, and this only, that the pharmacist can ever hope to be recognised as the all-important factor in the

production of a future British Pharmacopogia.

The President (Mr. CARTEIGHE) said: - My first idea with reference to the discussion that is to follow the paper was that, regarding its length-its necessary length-it would be scarcely possible to allow any discussion to-night. However, I find there are one or two gentlemen present who are not often amongst us, and who have come for the special purpose of offering a few remarks, that I feel tempted, with your permission, to give those gentlemen an opportunity to speak. With regard to other gentlemen desirous of taking part in the discussion, I will ask them to postpone their remarks for a future meeting. It will be, therefore, as well to adjourn the discussion until this day fortnight (November 25), when a special meeting will be

Mr. Wink (called upon by the President) said:—As a manufacturer of morphine and products from opium, I can endorse Mr. Umney's remarks with regard to the standard of opium being considerably below what it ought to be, and that no greater mistake could be made than to restrict the distriet from which it is collected to Asia Minor. Some of the

worst opium we receive is grown there; while we are forbidden to use that grown in Salouica and Tokat, from whence comes some of the finest opium imported into this country. I show a sample of opium confaining 11.7 per cent. of morphia, with 25 per cent. of moisture, representing good Salonica opium. Here is another sample of opium made up to answer the test of the old Pbarmacopæia, which would not yield more than from 6 to 8 per cent, of morphia; and I have brought a third sample, obtained from one of the districts of Asia Minor, containing no morphia at all. No ore but those possessing considerable experience could discern the spurious opium, as I have samples that contain no trace of morphia whatever, and which, to all appearance, look like the best. As regards the extracts, it is our experience that, if reduced to 50 per cent. of the weight, they get into the condition of a hard cake which will make powder.

Dr. REDWOOD, who on rising to speak was loudly cheered, said:—I look upon the paper we have heard read as a very valuable one. The subject has been treated in a very temperate, fair, and judicious manner. I cannot too strongly express my thanks to Mr. Umney for bringing forward the subject in that manner, and am heartily pleased with the fair and impartial spirit that has pervaded the whole of the statements upon the various topics. I am not at all surprised to find that Mr. Umney has pointed out errors, some of which others have on several occasions noticed, nor that he has repeated himself two or three times in his paper, when calling attention to a certain class of errors in the Pharmacopæia. Although these errors are of a clerical character, yet I must freely admit they are blemishes, and should not continue to exist in a work of that description. But I must say that I really was taken by surprise to find, especially in the cross-references of the work, so many instances in which the carrying out of the alteration in one place had not been extended throughout the whole of the work. Those are a kind of errors which you may certainly call clerical. It was felt that a great deal of the work of editing was of that character, and that the editors could in such a matter trust to those whose minds were more adapted to that kind of work. I would say, however, that those errors fortunately are not of an important or practical character, and can only hope that they will be removed as speedily as possible. I now pass to the part of the subject which I consider to be the essential feature and character of the work. In referring to what has been so well and ably stated by Mr. Umney, I find that whilst on the one hand he enumerates a number of the new or altered preparations of the Pharmacopæia which receive his commendation, perhaps in some cases qualified, and in others slightly so, yet, after careful consideration, he only mentions thirty-nine preparations which he complains of. With regard to these objections which have been raised, many of them must be looked upon entirely as matters of opinion. With reference to these objections it is gratifying to think that the commendation which Mr. Umney has expressed serves as an excellent answer to previous criticisms that have been offered by others; and in like manner, I coneive that we have only to wait a little longer to see others answer the objections which he has raised. (Hear, hear, and laughter.) I do not, however, wait for such aid and assistance, and although I shall not go through the whole of his objectious this evening, there are a few to which I should like Take the first case, that came early in the paper, the scaled preparations of iron (ferrum tartaratum), and of the citrates of iron; the objections which Mr. Umney urges against them will carry no weight with those experienced in the examination of these substances as met with in trade, and by those engaged in their preparation. I may say, without fear of being charged with egotism, that I have had experience in both respects, being the originator of the means which have been adopted to obtain the scaled preparations There is a slight excuse for those who have taken part in these investigations to hold to their opinions as long as they can. Mr. Umney's objection is that the proportion of iron should be greater, and that the standard for the oxide of iron should be higher than 30 per cent. My judgment, however, is in favour of not making it higher than that. say about 30, and I deny again the statement that the previous Pharmacopæia demanded that the citrate of iron should yield more than 27 per cent. It demanded that it should not be below 27, which was founded upon the examination of a great number of samples. With regard

to the standard 30 per cent., it is all very well for Mr. Umney to say that if you take fine cream of tartar you will get a product that will come up to 33 per cent.; but I repeat that if you take thirty manufacturers there will be a large quantity of what they produce will not exceed 30 per cent., and therefore I and others who have been with me have been unwilling to place samples supplied by the manufacturers, dealers, and vendors in the hands of the public analyst, who would not be able to take action in the matter on account of the inferior quality which we have fixed ourselves as the absolute standard. Again, with regard to the cherry laurel water, it is neither for Mr. Umney, nor myself, nor for this Society to say that it should not be in the Pharmacopæia. Medical men wish to prescribe it, and we wish to make it an article of uniform strength. (Hear, hear.) With reference to belladonna plaster, there will be a little inconvenience for some time to come, as we now order one that is not green, and the public have been accustomed to one of that colour. What has been said with regard to the other scale preparations will apply to citrate of iron and quinine. That has been so thoroughly established among medical men and others that if we had altered the product from that which they had been accustomed to, they would have said it was an important preparation, and that there was no necessity for any alteration. I maintain that that made under the previous Pharmacopæia was a satisfactory preparation if the instructions were carried out.

Mr. UMNEY (interposing): The formula was been altered in the new Pharmacopæia, more acid being added.

Dr. Redwood (continuing): Yes; there has been a slight increase of acid: don't suppose me to be a novice in the preparation of citrate of iron and quinine. But in its essential features the processes now are the same as in years gone by, and the product is of a similar kind. With reference to a preparation of my own, I should like to mention the liquid extract of bark. There must be something said against it of course—it is called an "elegant preparation" (laughter), but that if it be intended that the bark should be completely exhausted it is defective. I may say that I commenced my investigations on the subject with the assumption that with a limited quantity of hydrochloric acid bark could be exhausted. I soon found out that there was not the result without using more acid than I found expedient. With sufficient hydrochloric acid the bark can be exhausted, as has been shown by Dr. de Vrij and others, but this is not requisite. This does not affect the value of the preparation. The residue will be in the hands of manufacturers who will be actuated by commercial feelings in the matter. There is nothing to indicate that the intention was to enforce the taking out of the whole of the alkaloid, although the greater part of the alkaloids are taken out. But I dispute the results given by Mr. Umney, and state that others are quite prepared to corroborate the results that I have obtained, and that, by judicious selection of the bark and the proper treatment according to the process, fully 80 per cent. of the alkaloids contained in the bark may be taken out in the way suggested. With regard to the spirit of nitrons ether, in answer to what has been urged that we have made a mistake in reducing the specific gravity, for he has made hundreds of gallons and has obtained a higher specific gravity than we state, I would ask, Has he made it as the Pharmacopæia now directs? The former directions were to distil from the ingredients, put together 15 fluid ounces, which has now been altered to 14—thus increasing the relative proportion of the spirit which is added to the distillate and making the product of less specific gravity than if the distillation had been carried on to the 15 ozs. Mr. Umney says the specific gravity must be as he states it; but I ask that his word shall not be taken for gospel. I have always held that it was not well to tie down too closely, and we allowed a little latitude, the specific gravity to be slightly below that given in the last Pharmacopecia. Let me tell you why the alteration is made in this particular, that instead of 15 only 14 fluid ounces are to be distilled. It is because the latter part of the distillation causes a somewhat disagreeable flavour, and it is to avoid that, and to make the flavour of the spirit better than can be brought about by carrying on the distillation so long as any nitric acid remains in the retort. That is the alteration that has been made, and the fact that I have indicated Mr. Umney will find correct when he comes to make the experiment, and does not take for granted what he has not proved. (Loud cheers.)

PAPERS READ AT LIVERPOOL.

THE following notes on the preparations of the new Pharmacopæia were read before a recent meeting of the Liverpool Chemists' Association by Mr. Michael Couroy, F.C.S.:

ACETUM SCILLE.—This formula is improved in so far that the proof spirit is left out, but it will still be au unsatisfactory preparation, because the dilute acetic acid with which it is made is too weak to render it stable. To remedy this defect it should be made with a dilute acetic acid in the proportion of 1 part of acid to 5 parts of water, instead of 7 parts as now ordered.

ACIDUM CARBOLICUM LIQUEFACTUM is a very sensible addition, and will be found exceedingly useful for dispensing

ACIDUM HYDROBROMICUM DILUTUM is now made official. and the process given for its manufacture is, on the whole, a very satisfactory one. It contains 10 per cent, of real hydro-bromic acid, and will no doubt supersede the acid in general use now, made by Dr. Fothergill's process.

ACIDUM SULPHURICUM AROMATICUM.—Now made by the addition of strong tincture of ginger and spirit of cinnamon to the spirit previously mixed with the sulphuric acid. The mode of preparing this formula is a decided improvement on the last Pharmacopæia, but the result is a much paler preparation than formerly, with a less pleasant aroma. It would have been better had the tineture of cinnamon been ordered instead of the spirit, which is made with the essential oil.

ADEPS PREPARATUS.—This is directed to be made by melting the leaf lard at a temperature of 130° Fahr., instead of 212° Fahr., and the washing with water is dispensed with. These are improvements, but I think that something finer than flannel should be used for straining the melted fat, as a material like this will permit of the passage of small particles of membrane that will have a tendency to decompose the lard.

AQUA LAUROCERASI is standardised to contain 0.1 per cent. of hydrocyanic acid. This commends itself, since the water as distilled varies considerably in strength.

CERA FLAVA.—The melting-point is raised from 140° to 146° Fahr., and a very good mode of taking the melting-point is described. The melting-point of the 1867 Pharmacopæia was certainly too low, and that now given agrees entirely with my experience of beeswax from all parts of the world. I have never found a genuine sample with a melting-point lower than 146° Fahr.

COLLODION VESICANS.-In the preparation of this, one ounce of pyroxyllin is dissolved in 20 fl. oz. of "blistering liquid." I have not succeeded in making a presentable article of this strength, and I find the quantity of pyroxyllin is about three times too much. A collodion made with the amount of pyroxyllin ordered is almost a solid.

CONFECTIO SCAMMONII.—In this and many other preparations that formerly contained natural scammony, the resin is now substituted, with, I fear, very doubtful advantage.

CONFECTIO SULPHURIS is much improved by the addition of powdered tragacanth.

COPAIBA.—Under characters and tests we find it stated that "some varieties are opaleseent and slightly fluorescent a very necessary correction on the description of the 1867 Pharmacopæia, which excluded the fluorescent varieties. The following test is given for the detection of fixed oils:-"A small quantity heated until all volatile oil is removed yields a residue which when cold is hard, and, generally easily rnbbed to powder." This is scarcely sufficiently definite as a test, in my opinion, for I have used the same test for the last fourteen years, and have never found a sample of genuinc copaiba when entirely deprived of its essential oil that the residue was not readily pulverisable I therefore think that the word "generally "should have been left out.

ELATERINUM is the active principle of elaterium, prepared from the latter by exhaustion with chloroform. words are dangerously alike, and are likely to lead to man;

EMPLASTRUM BELLADONNÆ.-Herc we have a complet change, and one that certainly will not be popular. It is not made with the alcoholic extract from the root, instead of the alcoholic extract from the leaves. The result is a brown coloured plaster instead of the bright green coloured one of the last Pharmacopecia. On account of the large amount of extract it contains, it will undoubtedly be more efficacions, and from the same cause it is softer than the old kind.

EMPLASTRUM PLUMBI.—The amount of lead oxide is increased, with the result of a better and firmer plaster.

THE EXTRACTS OF BARBADOS AND SOCOTRINE ALOES are directed to be evaporated in a current of warm air, a means of evaporation that will less injuriously affect the virtues of the extracts than perhaps any other plan.

EXTRACTUM BELLE LIQUIDUM.—The spirit is increased from 2 to 3 fl. oz., but the quantity is still insufficient. This, and all other liquid aqueous extracts, requires 25 per cent. of rectified spirit for perfect preservation.

EXTRACTUM BELLADONN.E ALCOHOLICUM is made from the powdered root by maceration and percolation with rectified spirit, and subsequent percolation with water, until the measure of the percolate obtained equals the quantity of spirit used. This is afterwards evaporated to a suitable consistence. Whether this percolation with water is intended to chase the alcoholic tincture through the percolator and thus economise the spirit, or whether it is intended by its use to obtain some of the aqueous extractive of the root, is a query. The former is most probably the idea, and a very impracticable one it is, as anyone who tries this part of the process will find out. The addition of water gradually causes the powdered root to swell up and completely choke the percolator before the desired quantity is obtained. The only way to obtain a truly alcoholic extract with rectified spirit is to use that menstrum until exhaustion is complete. The spirit retained in the marc may then be recovered by distillation, without recourse to such a fad.

EXTRACTUM CALUMBLE is now made by exhaustion with proof spirit, but it is an extract for which there is very little demand.

EXTRACTUM CASCAR.E SAGRAD.E AND EXTRACTUM CASCAR.E SAGRAD.E LIQUIDUM.—The former is made by extraction with proof spirit, and afterwards with water, while the liquid extract is made by the clumsy and antiquated method of boiling in four successive quantities of water until exhausted. Why it is considered necessary to use proof spirit in the one case, and not in the other, is another query. I am not in a position to say whether the spirituous or the aqueous extract is the more active, but it must be remembered that the reputation gained by this fluid extract is on the merits of one which is asserted to be made by extraction with dilute alcohol.

EXTRACTUM CINCHON.E LIQUIDUM.—The red bark is used for this and all other einchona preparations, and the change is probably an advantageous one. The use of hydrochloric acid in the extraction of the bark is quite a new departure, and not at all a desirable one. The plan, moreover, does not exhaust the bark, and so far my experience of the process is that it requires an average of 1½ lb. of bark to produce 16 fl. oz. of liquid extract containing 5 per cent. of total alkaloids, and this, in working with bark of over 6 per cent, total alkaloids. Proof spirit, without the aid of acid, would equally as well exhaust the bark, with the further advantage of extracting the alkaloids in their natural condition.

EXTRACTUM COC.E LIQUIDUM is made with proof spirit, and is a most satisfactory preparation.

EXTRACTUM ERGOT.E LIQUIDUM.—The process for this is much improved by discontinuing the unnecessary extraction with other, and by the use of cold instead of warm water. The proportion of spirit used for its preservation is also wisely decreased.

EXTRACTUM GELSEMHI ALCOHOLICUM.—Here we have an instance of another alcoholic extract in which the absurd and falsely economical plan of recovering the quantity of spirit used by percolation with water is adopted.

EXTRACTUM GLYCYBRHIZE LIQUIDUM is improved by increasing the quantity of rectified spirit from one-eighth to one-sixth its bulk, but it would have been better had it been increased to one-fourth its bulk. Then there would have

been no risk of fermentation, to which this preparation is subject in warm weather.

EXTRACTUM NUCIS VOMICE.—The exhaustion of this is much improved by the mixture of spirit and water now ordered, four parts of rectified spirit to one part of water, and the result is a very superior extract, quite free from the greasiness of the extract made by the old rectified spirit process. The standardising of the extract is also most satisfactory, and so is the method given for testing its alkaloidal strength.

EXTRACTUM OPH AND EXTRACTUM OPH LIQUIDUM.—Both made by the old processes, but are now required to contain fixed percentages of morphine, the former 20, and the latter 1 per cent. This is a decided improvement.

EXTRACTUM PAREIR.E LIQUIDUM—This is now ordered to be made by dissolving 4 parts of extract of pareira in a mixture of one fluid part of rectified spirit and 3 fluid parts of water to produce 16 fluid parts. Pareira root varies considerably in its yield of extract, some samples yielding as low as 9 per cent., while others, in my experience, have reached 26 per cent. No doubt, 1 fl. oz. of this liquid extract is intended to represent 1 oz. of the root, and from the above it is evident it will represent the full amount of extractive from the finest root, as it assumes the yield to be 25 per cent. This preparation will, therefore, be more reliable than the old.

EXTRACTUM RHAMNI FRANGULÆ AND EXTRACTUM RHAMNI FRANGULÆ LIQUIDUM.—Here again is the inconsistency already alluded to in the case of solid and liquid extracts of *Cascara sagrada*, the solid extract being made by spirituous extraction, while the liquid extract is made by boiling in water.

EXTRACTUM LARZE LIQUIDUM.—Now made by extraction with proof spirit, followed by water, which will probably yield a superior extract to the old form. The strength is reduced, so that one fluid part now represents one part by weight of the root.

FEL BOVINUM PURIFICATUM.—The process is improved and the spirit economised by the evaporation of the bile to one-fourth its bulk before the treatment with spirit. This is the plan generally used when preparing it on a large scale.

FERRI PHOSPHAS.—Bicarbonate of sodium is substituted for the acetate in the preparation of this to avoid waste of the iron phosphate. A very necessary improvement.

GLYCERINA.—Under this class, several new preparations have been introduced, and some of the old ones improved by the introduction of water into the formulæ.

LIMONIS SUCCUS is required to contain from 36 to 46 grains of citric acid per fluid ounce. The strength given in the last Pharmacopæia was far too low.

LINI FARINA.—It is important to note that the powdered linseed eake from which the oil has been removed is no-longer official. The name now refers to "linseed reduced to powder," and probably means the light-coloured powder produced by crushing the seed in steel rollers and sifting.

LINIMENTUM ACONITI AND LINIMENTUM BELLADONN.E.

—Twenty ounces of either of these roots now produce 30 fluid ounces of liniment instead of 20. The result, however, is practically the same, it being impossible to exhaust the roots with the quantity of spirit formerly ordered.

LINIMENTUM POTASSII IODIDE CUM SAPONE is now directed to be made in a mortar, and rubbed into a creamlike product. The detailed directions now given will no doubt result in greater uniformity in the appearance of the liniment.

LIQUOR AMMONII ACETATIS FORTIOR.—It is quite impossible to make this as directed by the Pharmacopæia and at the same time to keep it within the limit of 3 pints, as ordered.

LIQUOR AMMONII CITRATIS FORTIOR.—This is another blunder. The salt begins to crystallise out shortly after the liquor is prepared. The product should be made up to 24 fl. oz., instead of 20. It would then be exactly four times stronger than the liquor of the 1867 Pharmacopoeia, which directed 3 oz. citric acid and  $2\frac{3}{4}$  fl. oz. of strong solution of ammonia to be added to 1 pint of water. This produced about 24 fl. oz., and when made four times stronger it kept well at ordinary temperatures.

LINIMENTUM POTASSII AND LINIMENTUM BELLADONNA is now directed to be made in a mortar, and rubbed into a cream-like product. The detailed directions now given will no doubt result in greater uniformity in the appearance of the liniment.

LIQUOR ARSENICALIS.—This and several other preparations of this class bave been altered in strength from containing four grains of the active ingredient per fluid ounce, which is equal to one grain in 120 minims, or one grain in 109 grain measures, to one grain in 100 grain measures. Although the change does not seriously affect the strength, it is nevertheless a positive disadvantage, because the minim is not equal to the grain in value, it being the measure of 0.9114583 grain of water. Were the minim and the grain equal, or if our measures of capacity contained such a measure as the fluid grain, the case would be different, but so long as we continue to use the minim and fluid draclim, it would be far better for everyone concerned, and more especially for the members of the medical profession, for the strength of these to have been left as they were. It is far easier for a medical man in prescribing to have a liquor arsenicalis to deal with containing half a grain in a fluid drachm than the same quantity in 54 6875 fluid grains.

LIQUOR CALCIS.—In preparing this the lime is now directed to be washed until freed from ehlorides, and the test is reduced from 5.6 to 5 grains of CaO per 10 fluid ounces. In this I am pleased to see that the practical paper read before this Society a couple of years ago by Mr. A. C. Abraham has been referred to.

Liquor Epispasticus.—The quantity of cantharides is reduced from 8 to 5 ounces, and the menstrunn is chauged to acetic ether. Made by the process of the last Pharmacopeia it was an unsatisfactory preparation, and no doubt the acetic ether now used will better exhaust the cantharides.

LIQUOR FURRI ACETATIS FORTIOR.—This is a most useful preparation. It is four times stronger than the tincture, for the preparation of which it is used. It is not at all a new article, as it has been in use for many years.

LIQUOR FERRI DIALYSATUS.—The specific gravity of this is given as 1.407 instead of 1.047—evidently a printer's error.

MISTURA SCAMMONII.—Now made with natural scammeny, instead of with the resin. Quite right, and as it should be; but it is a strange fact that this is one of the two preparations that were directed by the last Pharmacopæia to be made with the resin, while all the other scammony preparations were made with the natural scammony. Matters are now entirely reversed, all the other preparations being made with the resin, and only this one with the guru.

OLEATUM HYDRARGYRI AND OLEATUM ZINCL.—These are made to contain 10 per cent. of the respective oxides, and the processes given for their preparation work well.

OPIUM.—This is required when dried at 212° Fahr., and powdered, to yield about 10 per cent. of morphine; that is, not under 9.5 nor over 10.5 per cent. This standard is ridiculously low, and will have the effect of depriving medicine of all the best opium that reaches this country. This standard is about equal to that of the last Pharmacopecia, but then there was no maximum standard given. It is all very well to standardise preparations, but I think it is going too far when we attempt it with natural products; but, if we are to have a maximum and minimum standard for opium, let it be one that will include the best and exclude the inferior and adulterated kinds, instead of the reverse, as now obtains. To attain this it would be necessary to raise the standard fully 2 per cent. The new official test for opium is practically the one I had the bonour of suggesting to the Liverpool Chemists' Association last session. It is founded on the official test of the United States Pharmacopæia, and gives very accurate and constant results. It has, unfortunately, been deprived of one of its chief merits in the reduction of the quantities of opium and water recommended in my paper, the consequence being that the 1,040 grain measures of filtrate required can only be obtained at the sacrifice of much time.

PARAFFINUM DURUM.—It would have been better to have had the melting-point more closely fixed, instead of recognising paraffins ranging between the melting-points of 110°

and 145° Fahr. Ointments made with a wax melting at 110° Fahr, will be much softer than if made with one of the higher melting-points.

PEPSINE.—In testing this the albumen is directed to be passed through a sieve of 30 meshes to the inch, and the temperature is increased from 98° to 130° Fahr., while the time is decreased from four hours to thirty minutes. These are decided improvements.

PILULE.—Very few changes have been made in these, the most important being in the substitution of resin of scanmony for the natural gum in the pil. colocynth co. and the pil. colocynth et hyoseyami. The formula for pil. phosphoris is much improved by the addition of soap, but I think that a fatty basis would have been preferable to the present mixture of tolu and wax. The pil. quinime is omitted.

QUININE HYDROCHLORAS.—A most valuable addition introduced for the preparation of tineture of quinine.

QUININE SULPHAS.—Much more satisfactory tests are now given for ascertaining the purity of this. The test of the last Pharmacopeia was worse than nseless, as I have had samples of quinine sulphate containing as much as 15 to 20 per cent. of einchonidine sulphate, the presence of which was not detected by the old test. The present tests are thoroughly practical, and will have the effect of driving all impure quinine out of the market. I understand that they are founded on the researches of Dr. Paul, and we certainly would have difficulty in finding a better authority.

SODII CITRO-TARTRAS EFFERVESCENS.—This now contains sugar and an additional quantity of tartarie acid, and more closely resembles the popular article known as effervescing citrate of magnesia than it formerly did.

SPIRITUS ATHERIS NITROSI,-Formerly this was described as a spirituous solution containing nitrous ether, but now as a spirituous solution containing uitrous compounds, aldehyde, and other substances, and it is optional to make it by the official process. In preparing it by this process, the Pharmacopæia directs the distilled product to be 14 fluid ounces instead of 15 as formerly. This is then mixed with two pints of rectified spirit, or as much as will make it correspond to the official test. This test is the one recently proposed by Mr. Allen, and it gives very accurate and trustworthy results. Unfortunately it is not described in the Pharmacopæia, and that anthority refers one to the pages of the Pharmaccutical Journal for the particulars. It is important to observe that the well-proved fact of the loss of nitrous ether by age is now officially recognised. When freshly prepared, it is required to yield seven times its volume of nitric oxide gas; and after being kept some time, and the vessel containing it has been occasionally opened, it should not yield much less than five times its volume. This is altogether very satisfactory.

SPIRITUS AMMONLE AROMATICUS.—The carbonate of ammonia is now reduced to one-half, the strong solution of ammonia is doubled, and the product is made up to 8 instead of 7 pints as formerly. The spirit and volatile oils only are distilled, the carbonate and hydrate of ammonia being added afterwards. The specific gravity is given as 386, but it cannot be made to this standard, and by strictly following the directions of the Pharmacopæia the product has a density of about 900 at 60° Fahr. Made by this process a most satisfactory spirit is obtained, with a reliable and constant percentage of ammonia; whereas that made by the last Pharmacopæia process varied considerably in this respect.

Syrup. There are a few changes in this group. Syrup of chloral is improved by using less water and more simple syrup. Syr. rhamni is expunged; and, owing to the use of biearbonate instead of acetate of soda in the preparation of syr. ferri phosphatis, this syrup will now contain the full amount of iron phosphate. The quantity of phosphoric acid is also increased by nearly 50 per cent. The present form orders  $1\frac{1}{4}$  fl. oz. of concentrated phosphoric acid to the 12 fl. oz. of syrup.  $1\frac{1}{4}$  fl. oz. of the concentrated acid is equivalent to  $8\frac{1}{3}$  fl. oz. of the dilute. The previous form only contained  $5\frac{1}{2}$  fl. oz. of the dilute acid. The addition is rendered necessary by the increased quantity of iron phosphate that the syrup now contains, but it will make it very acid, and more liable than formerly to darken in colour, owing to the action of the acid on the sugar.

TINCTURE.—Five new tinctures have been added, namely, tinet, chlorofornui et morphina, tinet, cimicifugi, tinet, gelsemii, tinct. jaborandi, and tinct. podophylli. The former is practically chlorodyne, but differs in several respects from most of the formulæ in general use. In its preparation the Pharmacoperia directs the morphine hydrochlor, to be dissolved in the spirit (8 grains in 1 fl. oz.). This is practically impossible, as hydrochlorate of morphine is not soluble to this extent in rectified spirit, and the addition of the oil of peppermint makes no appreciable difference in its solubility. A better tinet, gelsemii would have resulted from the use of rectified spirit instead of proof spirit. The tinctures of cinchona and cinchona comp, are now made with red bark, and the latter tineture contains a trifle less saffron and cochineal. Tinct, cinnamon is now made with rectified spirit instead of proof, but, strangely, the product after pressing is directed to be made up with proof spirit. This is evidently an error. Tinct, ferri acctatis is made by diluting the concentrated liquor with water and spirit, and adding 5 per cent. of acetic acid. This makes a good tincture, and one that will keep well. Tinct, ferri perchlor, now only contains 25 per eent. of rectified spirit, and is made as formerly with liquor ferri perchlor, fort. The proportion of iodide of potassium in tinet, iodi is doubled. Tinet, kino is made by dissolving the gum in a mixture of spirit, glycerine, and water; a very great improvement. Tinct, nucls vomicæ is much changed, and is darker in colour than the old. It is prepared by dissolving 133 grains of the standardised extract in a mixture consisting of 4 fl. oz. of water made up to 20 fl. oz. with rectified spirit. One fl. oz. contains one grain of the alkaloids of nux vomica. Tinct, opii is prepared with dry powdered opinm, containing about 10 per cent. of morphine, and the resulting tincture is required to contain 0.75 per cent. of morphine, besides the other alkaloids of opium. Tinet, quinina is much improved by the substitution of hydrochlorate for sulphate of quinine, and is one-ninth stronger in the alkaloid than the fineture of the last Pharmacopæia. Tinet, sumbul. is also altered, the menstrumm being now rectified instead of proof spirit. But here, again, we have another mistake. The product, as in the case of tinet, cinnamomi, is directed to be made up with proof spirit. This, of course, should be rectitied spirit.

UNGUENTA .- Ten new ointments have been added, and several of the old ones more or less altered, chiefly in regard to their bases. This change gives the ointments better keeping properties, some in my possession over two years being still in perfect condition. It must be remembered, however, that these hydrocarbon bases have been frequently accused of causing irritation of the skin, and it is to be hoped that the Revision Committee have been well advised in making this change. In the formula for ung. iodi a mistake has occurred in giving the number of parts of prepared lard. The quantity is given as 19 parts, whereas it should be 1914. It is also very inconsistent, in cases where these parts are not whole numbers, for some to be given in fractions and others in decimals. As an example of the former see nng. hydr. nit., where the instructions are to take 31 parts of prepared lard; while in the case of ung. hydr. ox. rnb, the parts of hard paraffin are given as 1.76. There are several instances of this nature In other cases we have the decimal place carried to one figure only, and in others to two figures. For example, ung. gallæ and ung, hydr, subchlor, each contains 80 grains of the active ingredient to one fluid ounce of the base. In the former easc the parts of base are given as 1.5, and in the latter as 1.47. Either of these, it may be argued, are close enough, but, to my mind, we should have both consistency and accuracy in an official work like this.

VINUM IPECACUANHAR .- This is the only instance of change in the wines. The powdered root is now exhausted by maceration in aeetic acid and subsequent percolation with water until 1 pint of liquor is produced from 1 oz. of the powdered root. This is evaporated to dryness and powdered. The bowder is next macerated in sherry for forty-eight hours, with occasional agitation. I do not like the process, as it is clumsy, long, and tedious, but my chief objection is on the ground that the emetine must in a great measure suffer from the prolonged heating to which it is subjected. Among the articles contained in the last Pharmacopæia and omitted in the present, I notice dulcamara and its infusion. The infusion should go, but I fear that the virtues of dul-

camara have been overlooked, because the only official preparation was the infusion, which certainly was useless. My experience is that this article is coming into increasing demand in the form of fluid extract, made from the formula of the U.S. Pharmacopœia.

In conclusion, I think it must be admitted that the new Pharmacopæia, though containing many commendable features, is not what it should be, nor is it what it would have been had there been a few practical pharmacists on the Committee of Revision. The main errors are entirely due to the absence of practical knowledge, without which, I submit, it is impossible to produce a satisfactory work of this nature. As an ordinary unofficial work, the errors and blunders which it contains might be considered as trifling, but as a national Pharmacopœia, issued "By Authority," whose instructions and formulæ we are bound to follow, and whose tests are taken as the standard by which our preparations are judged, it cannot claim the respect of those who have to submit to its authority.

At a subsequent meeting of the Liverpool Chemists' Association Mr. Edward Davies, F.I.C., read an interesting paper on

THE CHEMISTRY OF THE NEW PHARMACOPŒIA.

The following were the chief subjects treated in the paper-

THE NOMENCLATURE OF SALTS

has long been a difficult question. The great influence of the binary system of Berzelius, due to the justly honoured name of its propounder, has not yet passed away. Still this new edition testifies to its waning and probably early extinction. According to this theory, the composition of a salt of an oxygen acid was, that the oxide of a metal was combined with what we should now call an anhydride. Thus oxide of calcium, CaO, was supposed to be united with sulphuric anhydride, SO3, to form CaOSO3, or sulphate of oxide of calcium, or sulphate of lime. Sulphate of oxide of iron, FcO,SO3, was similarly expressed. But whilst oxide of calcium had a popular name—lime—oxide of iron had not. the oxides of potassium, sodium, lithium, strontium, barium, and aluminum had the names potash, soda, lithia, baryta, strontia, and alumina, whilst the other metals had no corresponding names for their oxides. But the universal tendency to abbreviation in words or expressions in common use led to the use of "lime" instead of "oxide of calcium"; but for want of a term to express oxide of iron, "oxide of" was simply left out and the salt was called "sulphate of iron." This at once created confusion and seemed erroneously to point to two distinct kinds of sulphates, namely, sulphates of oxides and sulphates of metals; similarly with all salts of oxygen acids. The original theory also made a distinction between the salts of such acids as HCl, HBr, &c., which were called haloid salts, and those formed by oxygen acid, which were called oxysalts. The modern theory of salts mostly received is that they are the result of substituting a metal for the hydrogen in the acids. This applies to salts alike: from HCl comes NaCl, and CaSO, from H2SO1. The first is chloride of sodium, the second sulphate of calcium. There can be no doubt as to the more logical character of this system of nomenclature, and on every ground it is much to be preferred. The main objection is, that it fails to show the difference between the two salts formed by some metals which have two degrees of oxidation with corresponding salts. As, however, there are only two metals of this kind whose salts are used medicinally, mercury and iron, this is not of great importance. It is curious that these two cases are treated differently; in mercury, we have perchloride and subchloride; in iron, persulphate and sulphate. The importance of not leaving any doubt in the case of the mercury salts is of course the cause of the anomaly, and a very sufficient one. It is evident that another system in which the terminations ous and ic are used is inapplicable in the Pharmacopæia, where Latin names are used, and these must be capable of abbreviation. Thus the change from calcis sulphas to calcii sulphas becomes necessary, and similarly with all like cases. There is a case in which I think an anomaly has been un-

necessarily introduced. Calx sulphurata, so far as its medicinal value is concerned, owes it to the sulphide of calcium, and it might have been so called. If lime had been boiled with sulphur, the rather indefinite product might have been called calx sulphurata. Calx chlorinata may pass till we know certainly what is the composition of chloride of lime.

SODA TARTARATA AND ANTIMONIUM TARTARATUM do not seem to me defensible; the first should be sodii et potassii tartras, the second antimonii ct potassii tartras, or oxytartras, as it contains SbO.

## THE ALKALOIDS.

The termination *ina* is in accordance with instructions given by the Chemical Society in 1882 to their abstractors of foreign papers, that all basic organic bodies should have the termination *inc*.

## COMMENTS ON SOME OF THE ADDITIONS.

ACIDUM CHROMICUM and ACIDUM ARSENIOSUM should rather be called "anhydrides" than "acids," as they only form true acids when dissolved in water. However, as there are only two cases, and as until recently the word acid was commonly applied to anhydrides, it is perhaps hardly worth making a change.

ACIDUM HYDROBROMICUM.—Any excess of H<sub>2</sub>S could easily be removed by adding Br carefully. If the direction to distil until H<sub>2</sub>SO<sub>4</sub> began to come over was observed, it would be difficult to hit the exact point, and to get no precipitate with BaCl<sub>2</sub>.

ALCOHOL ETHYLICUM is evidently meant to replace absolute alcohol, and therefore the permission to allow 1 to 2 per cent. of water to remain, and consequent raising of the sp. gr. is intentional. This, however, renders it unsuitable for the preparation of sodium ethylate, the only use specified.

BUTYL-CHLORAL HYDRATE was formerly thought to be croton chloral hydrate,  $C_1H_2Cl_2OH_2O$ , which would contain two atoms of H fewer. Crotonic aldehyde is  $C_4H_6O$ .

CALX SULPHUEATA is a mixture of sulphide of calcium and sulphate of calcium. The carbon is only enough to reduce half the sulphate. The crucible should be closely covered, but this is not mentioned.

IODOFORM, the analogue of chloroform, is remarkable in many ways. It is very easily formed by the action of iodine on alcohol in presence of alkalies, and may be used as a test for ethyl alcohol, of which it will detect '05 per cent. in water. Methyl alcohol does not give the reaction. Its formula is erroncously given in the Pharmacopæia as  $\mathrm{CH_{3}L}$ . It is really  $\mathrm{CHI_{3}}$ , corresponding with  $\mathrm{CHCl_{3}}$  chloroform.

LIQUOR. AMMON. ACET. FORT,—Assuming carbonate of ammonium to be  $N_3 \Pi_{31}, C_2 O_5$ , the theoretical quantity of acetic acid would be about 60 oz., assuming the acetic acid to contain 33 per cent. of  $HC_2\Pi_3O_2$ . If, however, the old formula represented the composition, viz.,  $N_1\Pi_{16}C_3O_6$ , then 53½ oz. would be enough. In the former case the quantity of liquor would be considerably more than 3 pints mentioned in the new Pharmacopæia; in the latter, the quantity would be about right. I shall allude to carbonate of ammonium further on.

LIQUOR. SODII ETHYLATIS.—When sodium is put in contact with absolute alcohol it liberates hydrogen, exactly as it does with water. In the former case it forms NaC<sub>2</sub>H<sub>2</sub>O, in the latter NaHO. The decomposition is more easily effected with water than with alcohol, so that, if the absolute alcohol contains water, this will be decomposed first, and caustic soda formed, which dissolves in the alcohol. As there is about eight times as much alcohol as the quantity required to form the salt, if it contains only 2 per cent. of water there is the possibility of a good deal of caustic soda being formed.

POTASSII CYANIDUM.—Prepared in the manner described, the cyanide is free from cyanate of potassium, formed when the ferrocyanide is heated with carbonate of potassium. As the yield in this latter case is much larger, commercial cyanide always contains cyanate. For the purpose of purifying bismuth, the commercial cyanide would do as well.

SODII SULPHOCARBOLAS, formerly expressed as given in the B.P., NaC<sub>6</sub>H<sub>2</sub>SO<sub>4</sub>2H<sub>2</sub>O is now called phenol-sulphonate of sodium, and represented as NaC<sub>6</sub>H<sub>4</sub>(OH)SO<sub>3</sub>. There are two modifications, ortho- and para-, of which the potassium salts differ in crystalline form.

ZINCI SULPHOCARBOLAS. — Prepared as directed, there would be not a slight, but a dense precipitate with barium chloride, for there would certainly be abundance of sulphate of zinc. Why it has not been directed to be made as under sulphocarbolate of sodium, decomposing the barium salt with sulphate of zinc, I am unable to say.

#### CHANGES.

ACIDUM SULPHUROSUM is reduced in strength with great advantage. Solution of sulphurous acid oxidises so easily that it might be worth a trial to invert the bottle and keep the neck under water in a gallipot. I have seen solution of sulphuretted hydrogen kept thus.

ALUMEN.—Both potash and ammonia alums are now admitted, but only potash alum will do for alumen exsicatum. Whether potassium or ammonium sulphate is used in the commercial article depends on the relative price, and, so far as the medicinal action goes, it is indifferent which is used. Legalising potassium alum is therefore an improvement, as that only need be kept.

ANTIMONIUM SULPHURATUM.—I am sorry that I have not had an opportunity of analysing a specimen of this new preparation. Judging from the fact that  $H_2S$  will be liberated from the  $Na_2S$  present, I fancy that there will not be much, if any,  $Sb_2O_3$  present.

#### TESTS.

A general remark that I would make is, that it would be desirable if a list of tests were given, with an indication of their object. Of course, everyone with any knowledge of chemistry knows what  $\text{BaCl}_2$  or  $\text{AgNO}_3$  are to detect, but the intention is not always so clear. The test for sulpburons acid in acetic acid is one which may puzzle a student without a teacher to refer to, and I could not make out for some time the meaning of the test for ether purus with KI and starch. I suppose that it refers to an oxidation of the ether with formation of ozone, or some such substance.

ACIDUM CARBOLICUM.—Either the compilers of the Pharmacopæia intentionally authorise a very impure acid, or they have been misinfornued. I have been favoured with some information relative to carbolic acid from Messrs. Calvert & Co.:—"The pure medicinal carbolic acid, free from other tar acids, and the only kind for internal administration, has a melting-point of 42.2° C., and boils at 182° C. Exposed to air at 15° C. it completely volatilises without liquefaction. At 15° C. 100 parts dissolve 29 parts of water, and dissolve in 1,200 parts. When made the solution should be quite clear and colourless, though if exposed to air and light for a long time it may darken and deposit a brown oil.

No. 2 quality, suitable for ordinary surgical dressings of preparations, is found in a glacial or in an acicular condition. When fresh it fuses at 40° and boils as high as 183° C. This contains a little cresylic acid, and is more insoluble in water than No. 1, 100 parts requiring 1,500 of water at 15° C.

An acid having a crystallising-point of 33° C., and boiling at 188° C., is very inferior to either of the above, representing a quality suitable for manufacturing purposes only One hundred parts would require for solution not less that 2,100 parts water, and complete liquefaction would tak place on free exposure to air. The high percentage ocresylic acid and other impurities render this quality mos unsuitable for internal administration, and in case of antiseptic surgery it is objectionable from the relative insolubilit of the cresylic acid present, and, in consequence, read liability to separation in a concentrated form from that aqueous solution employed, leading to intense irritation of the surfaces to which it may be applied. The acidum can bolicum liquefactum of the new B.P. is altogether wrong in the description as to boiling-point and solubility in water, as the refer to very impure acid."

As pure carbolic acid is easily attainable, it is a pity the the door should be opened for the admission of a very impuarticle.

AMMONII CARBONAS.—A remarkable alteration has been made in the formula of this substance. As given in the o B.P. it was  $N_4H_{16}C_3O_8$ , which would give 28.8 per cent. ammonia, now it is represented as  $N_3H_{11}C_2O_5$ , which wou give 33.5 per cent. of ammonia. This is a serious different and shows itself at once in the preparation of liquor ammonia acetatis fortior. There is a long paper in the "Journal"

the Chemical Society" for 1870, by Dr. Divers, on the "Combinations of Carbonic Anhydride with Ammonia and Water," in which he gives analyses of eight samples of commercial carbonate of ammonia, with percentages of ammonia ranging from 33.05 per cent. to 31.48 per cent., and he appears only to have met with one sample which had the composition given in the old B.P. There is, however, carbonate of this composition now in the market, for a sample supplied to me by Messrs. Evans, Sons & Co. contained 28.8 per cent. of ammonia, whilst a sample of Howard's contained 32 11 per cent. of ammonia.

There is no difference in the description of the process, except that in the new B.P. it is said to be resublimed. There must, however, be a considerable difference in the process actually used, to give such different results. There is no perceptible difference in the appearance of the two

specimens.

The new B.P. gives the formula as showing the salt to contain acid carbonate of ammonium, NII, IICO3, and carbamate of ammonium, NII, NII, CO2. The latter salt is equivalent to neutral carbonate of ammonium, (NH<sub>4</sub>),CO<sub>3</sub>, less one molecule of water, and can be made by passing dry CO. and dry NII, into absolute alcohol. Carbonic acid, HNH2CO, is not known in the free state.

ANTIMONIUM NIGRUM PURIFICATUM.-I have endeavoured to detect 1 per cent. of sulphide of arsenic when added to sulphide of antimony free from arsenic, using the process given in the new B.P., and following the directions most carefully, but could get no satisfactory result, although I have had considerable experience in arsenic testing. By Fleitmann's test it can be easily detected. Dissolve 1 grain in as small a quantity of IICl as possible, add one drop of nitric acid, and heat until there is no smell of II.S, then add excess of caustic soda and some granulated zinc, and put a piece of filtering-paper moistened with solution of nitrate of silver on the mouth of the tube or flask. Heat until hydrogen is freely evolved, when if arsenic be present the paper blackens from reduction of the silver by the arseniuretted hydrogen.

In conclusion, I wish to say that my remarks have not been made with view of criticising the new Pharmacopæia in a hostile manner, but rather from a desire to consider it from a scientific point of view, and to explain some points which might be difficult. There are some faults from the chemist's point of view, but on the whole it is much

The following are selections from a paper read before the Midland Chemists' Association by Mr. A. E. Robinson. The paper was a lengthy one, and we omit remarks on the extracts, iron salts, glycerines, mercurials, infusions, pills, and tinctures, because these in general only indicated the changes which have been made.

The first thing that strikes us is the errata page of eleven errors in the book, published "by authority." None of them, it may be said, are of any very great importance, but "errors by authority "sounds bad.

In ACETUM CANTHARIDIS the flies, or rather beetles, are to be bruised, not powdered; a decided change for the better, owing to the extreme difficulty of filtration when following the old process, the preparation being equally efficient.

In ACETUM SCILLE the spirit is omitted; so much the better for the finished product. We do not find amongst the vinegars an ACETUM IPECAC, a preparation which has made an established name. We have a little later on in the work a feeble attempt at its introduction, but only that.

ACID GALLIC is prepared by a different process to that formerly adopted, which is a decided advantage, both as regards time and yield of product.

The compilers are careful not to commit themselves as to the real composition of the ACID BENZOIC obtained from benzoin. It may, and, in fact, often does, contain cinnamic acid in considerable quantity, and no test is given or mention made of this.

ACID HYDROBROMIC DIL.—Formulæ by the dozen have been given for this preparation in various papers, and have left us somewhat in doubt as to what has been meant by acid. hydrobrom. dil. Now all doubt is removed, and the

acid is to contain 10 per cent. of HBr., and the process is such as to ensure a preparation free from deposit.

In ACID NITRO HYDROCHLOR DIL, the acids are added to the water, and the mixture allowed to stand for 14 days before use. This ensures the rearrangement of the elements with reproduction of nitric and hydrochloric acids; the acid is therefore more strictly speaking a mixture of two acids, and not so liable to contain other compounds.

ACID SALICYLIC.—Yes, there it is, and a process inserted for its preparation, which is the subject-matter of a patent. If any experimental and economic chemist chooses to prepare this article and the patentee interferes, let him plead "by authority!" and all will be well-perhaps!

For the preparation of ADEPS we have a greatly improved process, the washing being dispensed with; this washing, which was instituted to get rid of salt only, tended to promote rancidity. The process of exposure of the fat for some hours, with subsequent crushing and careful melting at a low temperature and straining, obviates greatly the liability to rancidity.

ÆTHER ACETICUS made by the process indicated would contain more water and alcohol than would be removed by the carbonate of potash used, owing to the water of crystallisation in the acetate of soda used; the crystalline salt should most certainly be deprived of its water by being dried and carefully fused before introduction, and as a final desiccating agent we cannot choose a better one than the fused acetate itself, which can be used over again for the same purpose.

AMYL NITRIS.—A detailed process for the manufacture of this important drug should certainly have been inserted, as it is liable to considerable variation, and admits of no definite and precise examination. The test of fractional distillation is imperfect; it, at any rate, might have been supplemented with one for the assay of nitrite present.

BISMUTH PREPARATIONS.—The substitution of bismuthi citras in the preparation of liquor bismuthi for the direct process of the 1867 Pharmacopæia is a change in the right direction, as also is the process for bismuthum purificatum. Practical experience proves incontestably the superiority of the cyanide and sulphur mixture over the nitre for removal of the arsenic and copper contained in the crude metallic bismuth. This process, originally devised, I believe, by Hugo Tamm, many years ago, and apparently neglected, I have myself personally superintended for some considerable time, and have by its aid purified large quantities of bismuth. I may perhaps add, without egotism, that I took the liberty of suggesting this process to the Compilation Committee. find also under bismuthum purificatum tests given for detection of certain metals, and all traces of copper, arsenic, lead, iron, silver, tellurium, and silenium are specially interdicted. With regard to the test for arsenic, however, I think it is calculated more often to lose the impurity rather than to detect it. We are to treat the metal with equal volumes of nitric acid and distilled water, evaporate to crystallisation, separate the crystals, and evaporate the solution with addition of hydrochloric acid continuously, until all nitric acid is expelled, finally applying Marsh's test to the solution thus evaporated. Now I think it is a pretty well recognised fact that on dissolving bismuth containing arsenic in nitric acid, by far the greater portion of the arsenic remains in the residue as arseniate of bismuth, only the smallest traces passing into solution. This then removes the greater portion. Now we are directed to evaporate with hydrochloric acid the solution containing only traces; well, it is a further recognised fact that in examining any substance for arsenic, evaporation with strong and even weak hydrochloric acid is highly dangerous to the final result, owing to the extreme volatility of chloride of arsenic; and I feel convinced that the application of Marsh's test after such treatment as here indicated would not be of the slightest avail.

My own experience of a test for arsenic is an adaptation of that now adopted in the Pharmacopæia for detection of arsenic in sulphuric and hydrochloric acids; this is an ex-

tremely delicate test and easy of application.

CHRYSAROBIN is described as the medullary matter of the stem and branches of andira araroba, and as being lightbrownish yellow in colour. I have seen and examined a large number of samples of goa powder for use in the preparation of chrysophanie acid, and I never yet found one approaching the description here given. Whether or not, under proper conditions and careful selection, the medullary matter does or does not possess these characters I am not prepared to say, but I feel sure that it is not a marketable article. I never met with a sample containing more than 80 per cent. of chrysarobin extractable by benzole or other more useful solvents, and many only contain 50 per cent. For my own part I see no reason for making official the crude drug, which is not marketable, in preference to a preparation of the same which would be of almost constant composition.

CINCHONA.—I may eall attention to the very improved and far more scientific process for its assay. The assay of bark has always been one of the secrets of the profession, and I believe that even now, in this enlightened period, quinologists hold to their own processes with the greatest tenacity. Only a few weeks ago, when Mr. David Heoper, now Government quinologist, an old friend of this society, sent a paper to the Pharmaceutical Conference at Aberdeen on some analyses of different samples of bark, the process for the estimation of the several alkaloids was, may I say, carefully forgotten, although, credit be to Birmingham, my friend Mr. Alcock did his best to "draw the badger" on the occasion of the reading. The process here suggested in our standard work is, however, I think, a very good one, and, so far as I am able to judge, works well.

A test is introduced, and a much needed test is for the presence of the seed in Colocynthidis Pulpa. The seed, it is known, forms about 75 per eent, of the fruit. The examination consists in agitating the powder with ether, and evaporating the etherial layer; the presence of any remaining oil is unmistakable proof of the presence of seeds, as they contain a very large proportion of fixed oil, and the

pulp is free from it.

CREASOTUM is still a product of the distillation of woodtar; not a very precise description, considering there are some thousands of products of such distillation. It is worthy of note, as bearing somewhat on the ambiguity of the description, that the creasote of the 1867 edition possessed the property of coagulating albamen, the creasote of the present edition possessing no such property. Creasote is generally supposed to consist of guaiacal and creasol Morson's creasote consists chiefly of creasol, and boils at about 217°. The approximate boiling-point should, I think, have been mentioned in the text. A test is introduced for the detection of coal-tar acids, which is a tolerably delicate one.

An excellent process for the preparation of CALX SUL-PHURATA, commonly known as sulphide of ealeium, is given, and is very much superior to that given in the Pharmaeopæia of the United States.

CERA FLAVA AND CERA ALBA.—We are getting decidedly more scientific in our official knowledge of these. We have a quantitative test for the percentage of cerolein, discriminative test for the presence of hydrocarbon bases, resinous and fatty substances, and other vegetable waxes. Cera alba is also said to respond to the tests as indicated under cera flava, but this is not the case so far as the melting-point is concerned, this being raised 5° or 6° by the bleaching process.

Cocaine hydrochloras is stated to be readily soluble in water, aleohol, and ether; in the latter substance it is

practically insoluble.

Coming to the deeoctions, we find the two most important, Dee. Aloes Co. and Dec. Sarzæ Co., have both undergone slight change, the proportions of the ingredients in the former having been slightly altered, and dried liquorice root substituted for the fresh in the latter preparation. These alterations will give products less difficult to clarify.

A few of the plasters have undergone modification. Emplastrum Belladonnæ being now prepared from the alcoholic extract of the root will undoubtedly for some time give rise to much dissension among pharmacists and dissatisfaction among customers, who have been accustomed to the green plaster.

In Emplastrum Plumbi the oxide of lead in fine powder is again recommended, although why I cannot see, as the scale litharge is much more readily taken up by the oil and water than the finely-divided powder.

For JALAP a test is introduced for the determination of per cent.

the resin known as Jalapin, which must not exceed 10 per cent.; the trne resin of jalap (convolvulin) is to form, therefore, 90 per cent of the whole.

LAMELLE are a new class of preparations, so are TABELLE The description given of them is far from complete, and is susceptible of different interpretations; in fact, tabella nitroglycerine appear almost as great a mystery as is that much-esteemed individual the special Birmingham correspondent of THE CHEMIST AND DRUGGIST; another parallel—if you hit him he may go off.

Among the LINIMENTS are a few changes in lin. aconiti and belladounce—the proportion of camphor is considerably lessened, that of alkaloid being about the same owing to more complete exhaustion. Lin. iodi contains glycerine—no camphor; for the manufacture of lin. potasii iodidi c. sapone an improved method of manipulation is put forward; lin. saponis contains more water and consequently less spirit than previously, and, as is usually the case with such changes, is none the worse off for it; and lin. tereb. acet. is made with glacial acetic acid instead of an acid one-third the strength.

The Liquors have ten additions to their number; one of these, liq. ammon. eitratis fortior, is unsatisfactory. Liquores Donovani, sodii ethylatis, ferri dialysatus, ferri acetatis are perhaps the most important of the new accessions. Liquor atropinæ sulph., being made with camphor water, will keep longer. Liquor bismuth, et ammon, cit. is an improvement in many ways. In the preparation of liquores ealcis, sodæ, and potassæ the previous washing of the lime is ordered before final solution, &c., to get rid of soluble chlorides—a very necessary procedure. Liquor epispasticus is at last satisfactory, and might have been so at least ten years ago; same remark applies to liq. sodæ chlor. Liq. ferri dialysatus is said to have a specific gravity of 1.407, which, considering it ought to be 1.047, looks bad in the work published "by anthority." Liq. morphina bimeconatis, as is very unusual with morphia salts, gives a precipitate with caustic potash insoluble in excess; and, finally, all those known as 4 grams in the oz. liquors are altered so as to contain 1 per cent of the active ingredient-a change which I am not prepared. to say is good or bad.

LITHII CITRAS is now a crystalline, not an anhydrous salt, the liability to deliquescence being thereby destroyed, although we note the dose is not changed.

The OLEATES are represented, and badly too, by those of mereury and zinc, both being prepared by the most ancient of processes.

OPILM.—A really reliable process for its assay has at last been found, and published; a more unsatisfactory process than its predecessor could have scarcely been imagined. The present one works well and gives excellent results, as has been pointed out by Mr. Conroy.

PARAFFINUM DURUM and PARAFFINUM MOLLE are old friends with fresh faces. To the synonyms for the latter might have been added, with equal justice, chrisma, fossiline, and a few others, and the character of colour might have been fixed either at white or yellowish, but certainly not both.

PEPSINE is still a very crude substance, and prepared by a very crude process. Private enterprise in this drug is far ahead of our national standard; this, I submit, is far from satisfactory.

POTASSII ACETAS is extremely difficult to prepare neutral to test-paper as directed, as in the fusion of the salt acetic acid is driven off.

PULV. GLYCYRRII. Co. now contains the sulphur and fennel previously omitted; and the damping of the saffron in the PULV. CRETLE AROM., to bring out the colour, is now "by authority."

No long and useless process is given for the preparation of QUININE SULPH., as was the ease in 1867. The directions are all that are necessary, if we ask how many ounces of quinine were made by the ancient process. The tests now included for this drug are admirable, and there is almost an air of certainty about their application. This is certainly a change when we recall the process of 1867, which was capable of detecting any adulteration if it only promised to exceed 20 per cent.

In the SUPPOSITORIES there is no change of importance, excepting the substitution of ol. theobromae for the mixture of that base with lard and white wax; neither have the SYRUPS received much attention. We note, however, that syrupus chloral, is a thick, not a thin syrup; that in syrupus ferri iodidi a portion of the simple syrup is boiled with the green liquor, the intention being, apparently, to convert some of the sucrosc into glucose, thereby rendering it more stable; to what extent this is possible remains to be proved. I may, perhaps, add here that the whole question of syrup of iodidi of iron forms the nucleus of an investigation by my friend Mr. Perry and myself, and the results will probably be embodied in a paper before the Pharmaceutical Conference meeting in Biriningham. In syrupus ferri phosphatis we now have a process which will give a full-strength syrup. I certainly did expect to see incorporated in this work the process first recommended by a very old friend of all of us here, Mr. II. W. Jones-a solution of the iron in phosphoric acid. The process is remarkably easy of application, and is, to my mind, self-recommendatory.

The WINES, with the exception of ipecacuanha, remain in the same position as when we last saw them. The radical change in this one, however, more than makes out for any absence of change in the others. To what extent it will surpass or even equal its predecessor remains to be seen, but that it is impracticable in anything approaching the large scale is obvious from the look of it; however, as I understand that a paper will be read upon the subject shortly, before the Society, I will reserve any further remarks until then.

With ZINC SULPHO CARBOLAS and VALERIANAS we shall end the jumble. With regard to the former preparation, the directions given are to heat a mixture of earbolic and sulphuric acids, and saturate the product with oxide of zinc, evaporate, and crystallise. Following this process, we should get a product containing at least 10 to 15 per cent, of sulphate of zinc, to say nothing of other impurities. If, after forming the sulpho-carbolic acid by heating to the right temperature for the right length of time, the solution be neutralised with barium carbonate or hydrate to form the soluble barium sulpho-earbolate, and afterwards decomposed with an equivalent of zinc sulphate, the product will be almost quite pure, and will answer the tests prescribed in the

Finally, for ZINCI VALERIAN. I am of opinion that the antiquated process of decomposing sulphate of zinc with valerianate of soda might well have been omitted, and the suggested process of saturation of the valerianic acid taken its place.

Alluding to the Materia Medica of the Pharmacopæia, Mr. Robinson said: You will have noticed the removal almost entirely of habitats. We Britishers have always laid claim to Bos taurus, Sus serofa, and Gallus banckiva; but now we may, if we like, extend our domain so as to embrace many other forms of animal life. The leviathan which gives us our spermaceti, formerly "by authority" an occupant of the l'acific Ocean, may now be ours if we can find room for him. We can, pharmacopacially, grow our own beetles and fly our own cochineals; we can also, "by authority," own our own musk-deer park and grow home-made tobacco. If the exciseman interferes and differs from my view, point to the words on the cover, and again all will be well. I have also noticed some peculiar instances of immortalisation of names. We have, for example, the respected name of Hanbury in Garcenia Hanburii, while Copaiba Langsdorfii which, by the way, is, I believe, spelt with a superfluons g-memorialises a discovery of M. Lansdorff, a Russian consul at Rio Janerio. It is a pity this gentleman should not have chosen a nicer substance than copaiba balsam to go down to posterity with. Then, to come a little nearer home, we find our own Mr. Perry, or his namesake, so unfortunately mixed up with socotrine aloes as Aloes Perryi that it will be really impossible to separate the two, and say which is aloes and which is Perry.

In general construction of the work I think it is a matter of regret that so much room is wasted by giving directionsminute directions-for the manufacture of many chemicals, and that, on the other hand, insufficient attention has been given to the preparation of certain other compounds which, on account of their complexity, &c., require such.

For instance, we have elaborate processes for the manu-

curials, morphia and its salts, and a host of others, of which I think I am safe in saying that not a pound in twelve months of any or either is made by the processes there given, carried out in their entirety.

But while some directions are more than enough, others are insufficient. Take, for example, the description of tabellæ and lamellæ: what are we to understand by discs of gelatine containing so much atropine, or cocaine, or physostigmine, and tablets of chocolate each weighing so much and containing so much nitro-glycerine; and how can we, if we understand these are to some extent proprietary articles—how can we examine with any degree of accuracy these proprietary preparations when we know we are dealing with  $\frac{1}{100}$  grain of nitro-glycerine and  $\frac{1}{000}$  grain of atropine? Why, they might contain three times as much and easily escape criticism. Again, referring to nitrite of amyl, our chemical knowledge of this important and dangerous drug is very limited-its chemical composition varies with the modes of preparation; true, a test—a very rough test—is introduced, which is supposed to indicate a total percentage of 70 per cent. of amyl nitrite, but this, I am of opinion, is by no means the case. A large portion boiling below 212° is not nitrite of amyl, and this proportion can be varied accordingly as the process is by the direct action of the nascent nitrous gas upon amylic alcohol, or by passing the nitrous acid gas, separately prepared, through the amylic alcohol. With this particular drug I am of opinion that, having obtained a preparation by a certain method of the action of nitrous gas upon alcohol, and therapeutic examination having proved it reliable, such process should receive official adoption, and such only.

In conclusion, Mr. Robinson remarked on the services rendered by the Medical Council and the editors, pointing out that it was possible to criticise freely, but to print badly; but he again urged the desirability of adding pharmacists to the Pharmacopæia Committee.

Mr. Perry added some useful comments. He pointed ou that the gossypium of the new B.P. was no longer the "old" cotton-wool, but the so-called absorbent wool. The very general omission of habitats would occasion in some cases uncertainty as to what to use. He instanced orange-peel as a case in point. Opium, he thought, was standardised too low, as good opium, in its moist condition, he had generally found to contain 12 per cent. of morphia. Paraffinum molle, "white or yellow," was absurd as a description, and would lead to confusion. In the making of the four extracts, bellad. alcoh., gelsemium, jaborandi, and rhamni frangula, the spirit was directed to be forced through the percolator by means of water. Mr. Perry had tried this process at the time it was dealt with fully by the late Mr. Stoddart, and had found it far from satisfactory, the percolator becoming very soon completely choked. Liq. epispasticus having taken some part in the original experiments, of which the present form is the outcome, he could vouch for its efficiency. Lin. Pot. Iod. Sapone—1½ oz. of soap instead of 2 oz. makes a better preparation. Pulv. Cretæ Arom.—The same remark applies here as in the case of paraffinum molle-two kinds are recognised. Suppositories.—It was very desirable that a form should have been inserted for belladonna suppositories, which are frequently prescribed. Some makers use 2 grs. of the green alcoholic extract, and others 2 grs. of the ordinary green extract in each—a considerable difference in strength. Syr. Limonis.—It is impossible, if the syrup is left where the B.P. process leaves it, for it to be used in dispensing.

Mr. Jones (Coventry), after criticising some of the lecturer's remarks, pointed out that there were two preparations of rhamni frangula. The solid extract he supposed was to be taken at bedtime, and the fluid before breakfast, or for day service. He would also like to know how it was that ext. cinchonæ flavæ liq. differed to such an extent-the preparation sent out by a well-known authority on cinchona preparations was miscible with water, while a sample sent out by another well-known authority was non-miscible.

The only test given for brandy was its colour, which could be made artificially. He thought the Pharmacopæia contained evidence of too much "easy-chair" work.

Mr. F. H. Alcock was of opinion that the present British Pharmacopecia was a marked improvement on its predecessor. facture of tartaric and citric acids, ether, chloroform, mer- There were many errors in the book, some of which he could not help thinking were due to oversight in the proof-reading; and, although much stress had been laid on the uniform disintegration of drugs by passing them through sieves of a certain mesh, yet he noticed that some substances were ordered to be "in coarse powder," "finely comminuted in small pieces," &c. He also thought it unnecessary that there should be so many duplicate preparations of the same drug, of which there are no less than sixty-five instances.

Mr. Taylor, Mr. Barratt, and Mr. Thompson contributed to the discussion, and the last named moved the following resolution:—"That this meeting, while fully recognising the advancement made in the new British Pharmacopæia, is of opinion that, when any future edition becomes necessary, those who are practically engaged in pharmacy should be invited to assist in its compilation." Mr. Williams (from P. Harris & Co.) seconded the resolution, which was carried unanimously.

Mr. Alfred Southall proposed a vote of thanks to Mr. Robinson for his interesting paper, which was seconded by Mr. E. Corfield.



## STPHON FOR PHARMACEUTICAL PREPARATIONS.

SOUTHALL'S new Lime-water Syphon ought to be a very useful addition to druggists' appliances. It serves not only



for drawing off lime-water clear, but also for any macerated tineture. The sketch given above sufficiently explains it.

## THE "BEATRICE" FEEDING-BOTTLE.

INGENUITY seemed to have reached its highest point in regard to feeding-bottles, as there has been a lull lately in novelties in this line. But Messrs. Thompson, Millard & Co. (Limited) have just recently brought out one of a new design, which will be recognised as possessing two or three



features of marked utility. The shape is shown by the engraving. As will be observed it slopes on both sides, and will, therefore, lie down on either side with a fair quantity of liquid in it without leaking. This shape makes the bottle easier to clean than when the neek is bent. Another little advantage, which will be appreciated by nurses, is that the box is made so that the lower portion will hold the bottle

standing upright. This is a trifling alteration, but is of perpetual convenience when the bottle is in use. The bottle is fitted with a black rubber teat and tube, and with an opal glass stopper.

## HAYWOOD'S CHRISTMAS PRESENTS.

MR. J. H. HAYWOOD, of Nottingham, wholesale surgical appliance manufacturer, has given his attention to the manufacture of several very comfortable winter accessories, which he offers for sale by chemists. A "Christmas Cosy Muffler" is a very sensible arrangement for people who go out of hot rooms on cold nights. It is a knitted woollen wrap made so as to cover the mouth, nose, throat, neek, and ehest. It eontains also a pocket to hold a respirator. His "cosy slipper" is made of lambskin, with the soft wool both inside and outside, and is very nice to wear, especially for invalids or their attendants. Mr. Haywood also offers eosy chamois leather socks, and eosy magnetic foot-warmers. To the large number of people who suffer from cold feet these appliances will assuredly be welcome. The socks fit over the foot and lace; the foot-warmers have leather soles and woollen surfaces. These articles are a little ont of the way, but are none the worse for that, and come fairly within a druggist's stock.

## COMPOUND SYRUP OF THE HYPOPHOSPHITES.

The popularity of medicines of vast range does not seem to be on the wane, notwithstanding the tendency on the part of scientific physicians to reduce their prescribing to the most simple elements. Patients must be alllieded with a strange complication of diseases if they really need the assistance all at once of calcium, sodium, potassium, iron, manganese, quinine, and strychnine; but no doubt a combination of the virtnes of all these medicines looks promising, and, moreover, we believe is found very efficacious. Messrs. Lorimer & Co. have succeeded in producing a very good-looking syrup, which apparently keeps quite clear, and which has a slightly alkaline reaction. In each teaspoonful of this syrup is contained—

2 grains of hypophosphite of lime  $1\frac{1}{2}$  , , , sodium 1 , , potassium  $\frac{3}{4}$  , , , iron  $\frac{1}{4}$  , , , manganese  $\frac{1}{4}$  , , , quinine strychnine

This article is supplied in bulk or in put up bottles.

## NEW SHOP-BOTTLES.

THE York Glass Company (Limited) have prepared several series of phototype recess labels for shop-bottles and jars. That this style of labelling will sooner or later take the place of all the old hand-written labels we have no doubt. The recess labels are practically indestructible, as they are proteeted from contact with any liquid which may accidentally run down the front of the bottle, nor can they be rubbed off in the natural course of a few years' dusting. By photographed labels perfect letters are obtained, and the effect produced by a row of these bottles is much handsomer than by the old style, while each label is clearer to read. For poisons the company offer labels on red instead of on white grounds. This is a slight but not a sufficient protection Whenever poisons are kept among other bottles the stoppers ought to be locked in some special manner. Bottles labelled as described are supplied in 10, 20, 30, and 40 oz. sizes, and similar labels are adapted to ointment-pots, lozenge-jars, and show-bottles generally. The process, which has, we understand, taken some time to perfect, is the patent of Mr. Woodhead, the manager of the company.



## RECEIVING ORDERS.

JUMEAUX, BENJAMIN, Springfield, Ambleside, surgeon and artist. October 14.

NICHOLLS, JAMES, Old Infirmary House, Moulsham Street, Chelmsford, doctor of medicine. October 21. Court-Cheimsford.

SCHREIBER, GEORGE, 100 and 102 High Street, Honnslow, trading as "Schreiber & Sons," mineral-water manufacturer and confectioner. October 15. Exam. 17th November, 2. Court-Brentford.

## ADJUDICATIONS.

DEWAR, JAMES, 1 Ellison Street, Old Swan, Liverpool, berthing elerk and

mineral-water manu facturer. November 4. Court-Liverpool.

IIAMILTON, WILLIAM COWEY, 3 Lambton Terrace, Chester-le-Street,
mineral-water manufacturer. October 27. Court-Durham.

Mangles, John, Didsbury, trading at 39 Major Street, Manchester, as "John Mangles & Co.," drysalter. October 31. Court-Manchester.

SMITH, JOSEPH St. Alban's House, Upper St. Alban's Street, Weymouth chemist and druggist. October 22. Court-Dorchester.

#### SCOTCH SEQUESTRATION.

LAPRAIK, HENRY, 47 High Street, Glasgow, trading as "Crawford, Paterson & Co.," and the "Chapelside Chemical Company," drysalter. 22nd October, 12. Faculty of Procurators' Hall, St. George's Place, Glasgow. Claims by February 12.

PETITION AND TRUSTS UNDER CESSIO ACTS.

WILSON, MALCOLM, 55 East Howard Street, Glasgow, drysalter.

## NOTICE OF INTENDED DIVIDENDS.

BEVAN, RICHARD, Cobb's Hall, Lydd, Kent, physician and surgeon. Proofs to Off. Receiver, Townhall Chambers, Hastings.

BLAKE, JOSEPH NICHOLSON, Sheffleld, and the Mount, Eyam, surgeon. Second and final div. 6<sup>3</sup>d, on old proofs, and first and final div. 3s. 0<sup>3</sup>d. on new proofs, on November 5, at Off. Rec. offices, Figtree Lane, Sheffleld.

CON, RICHARB CORDEN, late manager to the Sussex Co-operative Drug Company (Limited), Preston. First div. 8s. forthwith, at offices of Trustee-F. G. Clark, accountant, Post Office Chambers, 58 Ship Street, Brighton.

RANSOME, THOMAS, Manchester, Openshaw, and Hest Bank, druggist and mannfacturing chemist, trading as "Thomas Ransome & Co." Trustee-J. White, 13 Norfolk Street, Manchester.

## ORDER FOR DISCHARGE.

RICHARDS, JOHN, Llandovery and Pontardulais, chemical manufacturer. Granted.

## COMPANIES ORDERED TO BE WOUND UP.

CROWN MINERAL WATER COMPANY (LIMITED). Liq.-E. Moore, accountant, 3 Crosby Square.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND. 27th November, 4, at Burlington House, Piccalilly. For account of wind-

RED ROCK LEAD MINING COMPANY (LIMITED). 2nd December, 2, at offices of the Company, 13 and 14 Cornhill. For account of winding up.

SUTTON AND MID-SURREY AERATED WATER COMPANY (LIMITED), Claims by November 16, to Liq .- G. Whiffln, F.C.A., 8 Old Jewry.

## PARTNERSHIPS DISSOLVED.

ALDRIDGE, RUSSELL, & GEORGE JOHN WILLIAM FLOWER, YCOVII, medical practitioners. September 29. Claims by November 1, to R. Aldridge.

BRICKWELL & HOUGHTON, Amersham and Penu, surgeons and apothecarles. October 21. (Benjamin Artbur Brickwell and Lambert Houghton.) Debts by Brickwell.

Fox, SPITTALL & Co., Hackin's Hey, Liverpool, mineral, chemical, and general brokers and agents. October 23. (Herbert Fox and Charles Buchanan Spittall.)

KENYON, HENRY, & Co., Bank Quay, Warrington, chemical manufacturers. March 12, 1883. (Henry Kenyon and John Campbell.)

LONDON CHEMICAL COMPANY, Bow Bridge Wharf, Stratford, chemical mannfacturers. October 30. (Edward John Ellis and Colman O'Shaughnessy.)

McBeath & Wilson, Sheffield, surgeons and general practitioners.
October 15. (Abereromby McBeatb and John Henry Wilson.) Debts by R. O. Wever, accountant, Norfolk Row, Sheffield.

THOMAS & WYKES, Risca, surgeons. October 22. (John Tubb Thomas and Edwin Wykes.)

WARHURST, THOMAS JOULE, & WILLIAM ELI CARRINGTON, Clough Mills, Chapel-en-le Frith, barytes manufacturers, and bone, manure, and oil merchants. October 10.

WILLIAMS, F. P., & Sons, Oldham Road, Manchester, chemists and druggists. (Richard Harding Williams and James Boden Williams.) As regards R. H. Williams. Cotober 21. Debts by J. B. Williams.

## Obituary.

CRAWTHER.—On October 9, Mr. William Charles Crawther, chemist and druggist, Great Quebec Street, London. Aged 30.

GREEN.—On October 29. at Frome, Somerset, John Hurle Green, chemist and druggist. Aged 54.

Garside, chemist and druggist, Ormskirk. Aged 71.

GALLUP.—We have to record the death of Mr. H. C. Gallup, which took place on October 31. The deceased, who was a native of Preston, Conn., U.S.A., came to this country about twenty-five years ago to take the management of the business in which he had a financial interest, then started in Great Britain under the style of "Jeremiah Curtis, Sons & Co.," with a view of introducing Mrs. Winslow's soothingsyrup and Brown's bronchial troches, he having travelled for those two articles for some time previously in the United States. As a means to gaining his end he adopted several, at that time, novel methods of advertising, amongst which was the house-to-house distribution of medical literature, interspersed with items of domestic interest, then done for the first time upon a large scale. In 1870 he added to the business the two toilct articles "Floriline" and the "Mexican Hair Renewer." A severe domestic affiiction some little time ago shattered his nerves, and from the apparently strong physique, capable of resisting all approaches of disease, he gradually sank into an invalid condition, which terminated, as already remarked, a fortnight ago. He had no relations on this side of the water, but he has left a son cleven years of age. He was buried at Norwood Cemetery on November 4.

HURDON.—On August 28, Mr. James Hurdon, chemist and druggist, Bristol. Aged 65.

NAPIER.—On October 20, Mr. Alexander Napicr, chemist, Edinburgh. Aged 52.

NEWBURY.—On October 9, Mr. Samuel Newbury, pharmaceutical chemist, Bournemouth. Aged 32.

SHARPLES.—On October 10, Mr. William Sharples, chemist and druggist, Preston. Aged 75.

JOHNSON.—On September 29, Mr. Thomas Simister Johnson, pharmaceutical chemist, Malvern. Aged 45.

THWAITES.—On September 30, at Albert Hill, Bishop Auckland, Mr. Frederick Thwaites, chemist and druggist. Aged 24.

THURLBY.—On October 15, Mr. George Thurlby, chemist and druggist, Gorleston. Aged 58.

WHITE.—On October 19, Mr. Frank White, pharmaceutical chemist, Nottingham. Aged 61.

## MARRIAGES.

KENT-FRITH.—On October 21, at St. Stephen's Church, Wandsworth, by the Rev. C. Wallace Neild, Vicar of St. Peter's, Rickmansworth, uncle of the bridegroom, assisted by the Rev. — Carruthers, Vicar, George Harold Kent, of 11 Westbourne Terrace Road, W., eldest son of C. Barton Kent, of 31 Lancaster Gate., W., to Alice, daughter of the late Edward Frith, of West Hill, Putney. Colonial papers, please copy.

BURNETT-TUDOR.-On October 18, at Clun, Salop, by the Rev. James Hanby, Joseph Fearon Burnett, F.C.S., pharmaceutical chemist, 294 Uxbridge Road, London, W., to Ann, daughter of Mr. William Tudor, of Clun.

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MESSRS. ALLEN & HANBURY'S ADVTS. (See pages 42.

HAY'S SOLUBLE ESSENCE OF GINGER. See page 70

HAY'S NEW PREPARATION.

See page 76.

HAY'S COMPOUND FORTIFIED ESSENCE See page 70



THE BRITISH PHARMACOPŒIA, 1885.

THE new Pharmaeopæia is by this time in general use, and has passed through its inevitable baptism of criticism from both medical and pharmaceutical authorities. The last word has certainly not yet been written concerning it; but already a formidable array of unfavourable comments has appeared especially from the pharmaceutical body—and a considerable section of this journal, and some forty pages of "The Chemists' and Druggists' Diary," now nearly ready, are occupied in commentaries on its novelties and characteristics,

It is even yet too early to sum up the general opinion of the work. Let it be remembered that, from the moment of its appearance, hundreds of keenly critical eyes searched it microscopically for the discovery of errors and deficiencies. Without the discovery of these there was but little material for a paper; and papers on the subject were called for. The repeated contribution of unfavourable criticisms from this quarter and from that one, first on one subject then on another, now by a doctor and then by a pharmacist, would lead the careless reader to assume that the work is just a mass of blunders. This would be a most unreasonable conclusion to come to. The new Pharmacopæia contains over eight hundred chapters on subjects concerning which a great variety of opinion is inevitable. Of these chapters more than a hundred are quite new, and modifications have been introduced into perhaps a third of the rest. Setting aside the points which are matters of opinion juerely, there are not more than twenty or thirty objections in all that have been seriously raised against the work of the revisers. Of these, apart from the few misprints, such as the specific gravity of dialysed iron, or what may be called errors of calculation, as in the ease of the stronger solution of acetate of ammonia, there are less than half a dozen faults which the pharmaceutical and medical worlds would agree in condemning.

It is perfectly right that such a book as this should be subjected to the most minute criticism; but care is necessary to read such criticism aright.

In one respect this Pharmacopæia has been singularly successful. It has not been shown by any competent authority that any single error has been committed either in discarding old remedies or in adding new ones. The twenty-two articles pitched overboard have scareely wrung forth a solitary sigh. A few critics have hinted that the pruning-knife might have been more liberally used, but they have discreetly avoided exact indications. There have been, of course, individual objections raised in regard to the novelties. But there has been no unanimous condemnation of these. This, it must be remembered, is quite a medical question. Pharmacists could not, under any circumstances, claim a vote in regard to the admission or exclusion of remedies, and though they may smile at some of the introductions-such as the tinetura chloroformi et morphinæ, cum acid. prussic., enm peppermint, cum ether-it is not in their province to express an audible opinion. Still, it is fair to recognise that the rejections, the admissions, and the omissions, have been accepted with a general verdict of satisfaction.

The novelties of nomenclature introduced cause no difficulty, and accord with scientific opinion as far as a dogmatic treatise of this kind can do so. This is much to be thankful for. Pharmacists should also be grateful for other indications of conservatism. It is a considerable mercy that, with so much science in the air, we have been spared the serious calamity of a revision of our weights and measures. This might have happened; a decimal and centesimal tendency is observable in many places, and will cause just annoyance enough to give an idea of what the complete revolution demanded by some of the extremists among us would have occasioned.

Some sneers have been indulged in concerning the occa sional indefiniteness in regard to characters and tests. In almost every instance where this occurs it is fair to say it is an indication of consideration for the pharmacist and the Sale of Food and Drugs Act, which, let it be remembered

has come into operation since the publication of our late official guide.

The standardising of drugs is a good object, but so far asas it has been carried out we doubt its success. A seriouscharge has been made that opium has been standardised toolow, and the pertinent question has been asked, "What are we to do with our superior opium? Adulterate it?" Thisleads to an awkward dilemma. There will be a practical difficulty, too, with extract of nux vomica, which will getstronger as it gets older, by evaporation, but that condition will not be much worse than what happens under the presentsystem.

One feature of the new Pharmacopæia is the tendency displayed towards more powerful and more perfect preparations of drugs. This is particularly observable in the new alkaloids, in the new fluid extracts, in the concentrated liquors. There is a shadow of indication the same way in the "chuckings out." The fall of Dec. Ulmi, Syrupus Rhamni, Inf. Dulcamaræ, Mist. Gentianæ, Pil. Quiniæ suggests a declining faith in the virtues of vehicles. In a future Pharmacopæia the whole range of decoctions and infusions and half the tinctures and syrups will have to go. When it becomes recognised that the virtues of a drug can be convenicutly and perfectly presented in a highly concentrated form, that will be the adopted Pharmacopæial preparation, and prescribers will dilute it at their pleasure.

The paper read by Mr. Umney at the meeting of the Pharmaceutical Society on the 11th iust., opened by far the most important discussion on the Pharmacopæia which has yettaken place, especially as it was read in the presence of the three editors of the work.

Mr. Umney, as one of our ablest and most experienced pharmaceutical workers, has himself contributed largely by his recorded observations to the improvement of formulæ. In his paper he gathered together and presented forcibly the weightiest objections that could be urged against the details of the work. Some of his criticisms were severe, and all were weighty; but he eame to the general conclusion that the work as a whole is in every way up to the standard of its predecessor, and is in many respects its superior. The weakest part of its editing, in his opinion, shows too great deference to antiquated notions. We have already intimated our thankfulness for that deference in some particulars, especially in regard to weights and measures. Mr. Umney, we believe, would welcome a complete adoption of the metric system.

There is promise of a very animated and instructive diseussion at the adjourned meeting on the 25th inst., and it is ecrtain that the detractors of the Pharmacopæia will not have matters all their own way. Professor Redwood, to whom is rightly reserved the opportunity of a more complete answer, showed in his preliminary remarks so much fire and vigour in defence of some of the attacked formulæ as to prove that these will take a good deal of killing, even if they are vulnerable. The large audience received Professor Redwood's speech with great satisfaction, testifying, as it did, that his retirement from the more active duties of the professorship was not due to anything like failing health—either of body, or mind.

## DR. QUAIN ON MEDICAL PROGRESS.

DR. QUAIN delivered the annual Harveian Oration last month. This ceremony has been gone though, with but a few brief periods of intermission, since 1656. The performance was enjoined by Harvey himself, who conveyed his patrimonial estate to the College of Physicians for various purposes, including this one. Surely the two hundred eulogies which have been delivered must have satisfied the great way

ghost, and his fame, no doubt well won, might be trusted henceforth to take care of itself. To educated people of the present day the perpetuation of these purchased honours reflects discredit rather than glory on the subject of them, and the College of Physicians would be well advised in obtaining an Act of Parliament enabling them to turn their trust to more practical purposes.

Dr. Quain himself seemed to have some inclination towards this idea, if we may judge from his choice of a subject. He fancied Harvey's portrait, hanging before him, suggesting that the orator should tell him something of the profession he loved so well instead of repeating the well worn history of his own achievements. The proposal would have been a very sensible one on the part of the portrait, and the idea resulted in a very interesting lecture. But we cannot credit Harvey with the modesty of it, nor can we regard Dr. Quain as having acted quite fairly towards "the immortal" one, in pretending that his portrait had desired the reversal of the express terms of the indenture.

One part of Dr. Quain's oration was based on the inquiry, Why is it that, amongst a vast number of persons, alike in ancient and in modern times, medicine has not enjoyed that high estimate of its value, as an art and as a science, to which it is justly entitled? The genial doctor, it will be seen, assumes without discussion the obvious injustice of the low estimate of medical science, and generally in healing it attributes this defective estimate to the ignorance of the ordinary public. But it is curious how many of our greatest authors have levelled their satire at the medical profession.

"Quot Themison agros autumno oceiderit uno?" asks Juvenal satirically, in reference to the leading practitioner of his day-an expression parodied in our own times by an eminent statesman, who asked his friend and physician how many deer he had killed during his autumnal holiday, and, on being told a dozen or more, exclaimed, "I congratulate you; you could not have had more success amongst your patients!" Doctors have themselves set an example of this sort of chaff. Celsus asserts that "optima medicina est non uti medicina." Hoffmann exelaimed, "Fuge medicos et medicamenta si vis esse salvus." Dr. Gregory, half a century ago, expressed the opinion, not more discouraging to his profession as a physician than damaging to his reputation as a prophet, that "in fifty or a hundred years, the business of physician will not be regarded even in England as either a learned or a liberal profession." Magendie once stated that "the doctor is often superfluous, sometimes mischievous, and occasionally fatal."

"Trust not the physician," said Timon to the banditti; "his antidotes are poisons, and he slays more than you rob." The opinion entertained of the profession by Molière is too familiar to need repetition; whilst Voltaire tersely described their practice as "pouring drugs of which we know little into bodies of which we know less." Dr. Arnold wrote, not so long ago: "The philosophy of medicine, I imagine, is almost at zero; our practice is empirical, and seems hardly more than a course of guessing, more or less happy;" and Sir William Hamilton asked, "Has the practice of medicine made a single step since Hippocrates?"

The sects, the superstitions, the systems, and the speculations which have grown up in ancient and modern times within the profession itself, Dr. Quain recognises, have occasioned much of the sarcasm and scepticism of which specimens have been quoted. Some of these remain amongst us, but the orator claimed—and his claim must be freely admitted—that within the last fifty years enormous strides have been made towards a more scientific comprehension of the conditions amid which the medical art has to be practised. The great advances in anatomy, physiology, the processes of

digestion, pathology, the influence of parasites, microscopy, instruments of surgery, and in therapeutics, were detailed and enlarged upon. Pharmacology has done much for medicine within the past fifty years. The discovery of the alkaloids, beginning with morphia in 1817, has enabled physicians to determine with accuracy the value of drugs; the introduction of anæsthetics, followed by the recent introduction of chloral-hydrate and cocaine, with nitrite of amyl and of sodium, and nitro-glyeerine, for the reduction of arterial tension.

The proper use of the bromides is comparatively new; indeed, bromide of potassium was omitted from the London Pharmacopaia of 1851 as being a useless drug. The doctrine of germs, so dominant in pathology, pervades and influences therapeuties also. Antisepties and antipyretics are being employed in treatment to an extent of which the last generation could not have dreamed, and with results of the greatest practical advantage. The introduction of the salicylcompounds in the treatment of rheumatism is still a comparatively recent event. Some of the new antipyretic drugs. almost rival in power quinine and salicine themselves. Surely all this is improvement of the best kind. Quain asks us to contemplate the condition and prospect of a surgical patient only fifty years ago: no anæsthetie to induce insensibility to pain; no antiseptics to promote healing of the wound; no chloral to procure sleep; no antipyretic in general use to control fever. With such instances before us, how unjust to say, with some, that mediclual therapeuties remain stationary.

Heartily Dr. Quain believes in a great future for medicine; and so do most of his readers. But it is amusing to note with what naïve satisfaction he winds up his address by quoting the Registrar-General's mortality returns. These show for England and Wales a decline from 23.3 per 1,000 in 1838, when the statistics were first collected, to 196 in 1881. These statistics, analysed by Mr. Noel Humphreys, show that the mean duration of life has been extended by two years among males, and by three and a half years among females. This is satisfactory; but Dr. Quain does not seem to think it neeessary to offer the least shadow of proof that this improvement is due to medical seience—he coolly assumes that conclusion. As far as evidence goes, the proprietors of Parr's Life Pills might as fairly take the credit, and as a matter of fact the amelioration is mainly due to eauses with which medicine has but little to do. The people as a whole were better fed, better clothed, and better housed in 1881 than in 1838, while better sanitary provisions, Factory Acts, and labour laws generally, have tended to make life more comfortable, and consequently longer, for vast masses of men and women. These conditions account for perhaps nine-tenths of the reduction of the death-rate. Medical men have worked well with their fellows towards the good end, but the rest of us are not disposed to credit them with all the benefit secured, and it is surprising that so keen a logician as Dr. Quain should claim it as a matter not needing argument.

# PASTEUR'S TREATMENT OF HYDROPHOBIA.

ONCE more M. Pasteur has startled the civilised world with the prospect of a great discovery in medical science. He believes, and many of the greatest medical authorities believe with him, that he has perfected a method of treatment of hydrophobia which shall be not only prophylactic but, what is of far greater importance, curative also. He has for a long time occupied himself with experiments with the virus of this dreadful disease. He has kept a number of mad dogs, has obtained the poison from their saliva, and has moderated it to

a safe dilution by successive inoculations on rabbits; he has "vaccinated" dogs with this modified virus, and he has proved that under the influence of the vaccination they are not, to all appearance, liable to infection. Of late he has had the opportunity of testing his solution of the virus on human beings. The case reported by him to the Academy of Medicine, on October 27 was this:—

A boy, twelve years of age, named Meister, had come from Alsace with his mother. He had been bitten fourteen times. The antopsy of the dog which had bitten him left no doubt that it had suffered from hydrophobia. M. Pasteur took the celebrated Dr. Vulpian and a professor of the School of Medicine to see Meister. The two doctors stated that he was doomed to a painful death, and might be experimented upon. The treatment thoroughly succeeded, and Meister is in perfect health. When the treatment began he had been bitten sixty hours, and had travelled from Alsace to Paris.

The inoculations were made with a subcutaneous needle, between July 7 and 16. "Control experiments" were made with the same injections upon rabbits, and proved that the virus was active. Moreover, since the effects of the modified virus, when introduced into an unprotected animal, are rapid and severe, and its period of incubation extremely short, the result of the attempt to rescue the child from a horrible death would soon be apparent. If he had died of hydrophobia it would probably have been within a month. If he survived this period there was every reason to hope that he would be as much protected against its future manifestation as the dogs which had been tested before.

Joseph Meister was in perfect health up to the end of October. M. Pasteur believes that he is safe from hydrophobia for the rest of his life.

Other cases have been brought to M. Pasteur since. The discovery is still on its trial, but there can be no doubt of the great hope which may reasonably be entertained, that this most terrible of diseases may not only be cured but extirpated. This grand achievement, if accomplished, will gloriously crown the long series of scientific triumphs which have contributed such lustre to the fame both of M. Pasteur and of his country.

# DOCTORS AND CHEMISTS IN HOMŒOPATHY.

At the British Homocopathic Congress, held at Norwich a month ago, Dr. Galley Blackley submitted a paper on "Doctors and Chemists." He narrated how much homeopathic chemists had done to keep the lamp of true medical seience alight in darker days, and he described how important it was that there should be a sufficient number of conscientious and skilful homocopathic chemists to support the homocopathic medical men, the supply at present being, according to Dr. Blackley, unusually inadequate. He urges that the Homocopathic Pharmaceutic Society should be encouraged to work up to the position of assuming educational functions, with a fully equipped laboratory in which crude drugs should be examined or analysed before being supplied to ehemists; and that after a time they should endeavour to obtain special powers from the Legislature, similar to those conferred on the Pharmaceutical Society by the Act of 1868. To make this practicable, he would have doctors discontinue prescribing, and chemists cease prescribing. The subject was discussed by Dr. Hayward, Dr. Clifton of Northampton, himself formerly a homocopathic chemist, Dr. Dudgeon, and Dr. Clifton of Leicester, on whose suggestion its further consideration was deferred for a year, when it was hoped a committee of the Homocopathic Pharmaceutic Society would meet the Congress and discuss the subject with them.

In the course of Dr. Dudgeon's remarks, that gentleman pointed out the necessity of having a distinct formulary, and instanced tincture of arnica. This, he said, is made by nine-tenths of chemists from the flowers, and it is on this account that tincture of arnica sometimes produces crysipelas. Dr. Dudgeon cannot make out why the British Pharmacopæia should order this tincture to be prepared from the flowers. As it is ordered to be prepared from the root in both the last and present editions of the Pharmacopæia, Dr. Dudgeon's homily seems a little out of place.

# AËRATED-WATER MAKERS AND THE EXCISE.

DURING the recent Brewers' and Aërated-water Makers' Exhibition, held at the Agricultural Hall, a congress of aërated-water makers was convened, and this was largely attended. One topic of considerable importance was discussed. It was in reference to the effect of the Customs and Inland Revenue Act of last session on the trade. That Act extended the definition of beer. According to the Act of 1880, the word "beer" includes ale, porter, spruce beer, black beer, and any other description of beer containing 3 per cent. or more of proof spirit. The Act of 1885 says, "The term 'beer' in the Inland Revenue Act, 1880, shall be construed to extend to any liquor which is made or sold as a description of beer, or as a substitute for beer, and which, on analysis of a sample thereof, at any time shall be found to contain more than 2 per centum of proof spirit." In the north of England large quantities of botanic beer, horehound beer, and suchlike liquids are manufactured and sold, and the makers declare that, though they can produce an article with less than 3 per cent. of proof spirit, they cannot get the quantity down to 2 per cent. Thus they say they will be required to take out a brower's licence of 20s. a year, and pay 12s. 6d. on every hundredweight of sugar they use, while their customers, the shopkeepers, would have to take out beer retailers' licences, and the effect would be to ruin them all round. In the course of the discussion Mr. Williams, of the firm of Idris & Co., of London, said:—"So far as ginger-beer manufacturers are concerned, they have nothing to fear if they use acid. After the Act was passed in August I tried what I could do in the manufacture of ginger-beer with sugar and acid, and I found the amount of alcohol at any state of fermentation never exceeded 1 per cent., because as soon as a certain percentage of alcohol was formed, a certain portion of that was converted into acetic acid. The alcohol in one gallon never exceeded 1 per cent. If there is no acid used in brewing we might get more than 2 per cent."

The matter is, however, evidently a serious one, and the congress did well to appoint a deputation to wait on the Board of Inland Revenue in reference to the clause. Mr. Charles B. Forsey, the secretary to the Excise Department, was interviewed, and his reply to the deputation, as reported in the Mineral Water Trade Review, was as follows:—

"The maximum amount of proof spirit allowed is 2 per cent., and any brewings above 2 per cent. come under the same regulations as regular brewers.

"Although we have had samples sent here which have contained 3, 4, 5, 6, and in one instance 9 per cent., we have not taken any action, neither shall we do so without first warning a manufacturer, unless we meet with a flagrant

"I do not think you would do any good by appointing a deputation to wait upon the Board. After we have warned a manufacturer, he must take the responsibility of the consequences if he exceeds the maximum. I scarcely think we could get a magistrate to convict, if we could only prove

 $2\frac{1}{10}$  per eent., but I am not prepared to make a bargain with you. I am here to see the law is adhered to.

"Yesterday we had a bottle of ginger-beer brought here which contained  $4\frac{1}{2}$  per cent. Your beer may be below the maximum when you send it out, and so far you would be safe, though in coming to maturity it might generate more spirit, and in that case the retailer would be liable. I find that they who brew these so-called non-intoxicating beverages with the greatest amount of spirit do the largest trade, and they are better liked by the advocates of temperance."

## COMMERCIAL TRAVELLERS.

The committee of the Wholesale Druggists' Association of Philadelphia presented a report upon commercial travellers, at the recent assembly of the Association in Philadelphia, in the course of which it was stated that, while it was not competent to declare to what extent or in what direction the system of commercial travelling was responsible for the existence of many of the evils of the trade, such as the keen competition and the large over-production of the day, it is quite certain that the system has created several of the abuses under which the trade now labours. Yet, while commercial travelling cannot be abolished, it is a question whether some clear-headed and concerted measures ought not to be taken, with a view of correcting, or at least modifying, the conditions which so frequently produce disappointing or profitless results.

A special talent in the line of salesmanship is the result of a natural aptitude for the ealling, combined with a good business trading; and it may be taken for granted that, as a rule, young men who have been commercially educated in the hous is for which they travel will be more reliable and better fitted for the special service than those men who hop from pillar to post, and who belong to that large army of royageurs du commerce who have essayed to travel in the course of their careers in many, and widely different, branches of trade, and whose aim principally is to swell the aggregate of sales, the matter of profit being too often of secondary import. The young man, on the other hand, trained by his employer will have a better and clearer knowledge of the more remunerative lines, and will push them, keeping from view those unremunerative lines which go of themselves without being assisted.

Some houses in the drug trade have abolished, and others have reduced, their commercial travellers with satisfactory results. Some have found the substitution of commission in lieu of salary, where the salesman has been really efficient, to be mutually advantageous, as the plan tends to stimulate a desire for profit rather than large figures in sales, and also to a greater economy in working expenses.

These questions, and also whether it is not desirable to reduce the number of travellers and keep upon the road only men of the ripest experience, and in some sense make them limited of partners in the business, are worthy of serious consideration.

In Great Britain, says, the reporters of this committee, which country sends about 40,000 men on the road, commercial travelling is reduced almost to a seienee. It is the custom of the Anglican to allow a fixed sum for travelling expenses, ranging from 16s. to 21s. per day, the allowance being made for either six or seven days of the week, as may be agreed upon. The eharges at the commercial hotels are lower for the commercial travellers than for other guests. The railways do not make any reduction from established fares, but as there is the option of first, second, and third class, and as the journeys are generally short, the last named is mostly selected. The visits to

points on the route are so well timed that many orders are taken on what is termed "journey accounts," i.e. to be paid for on the succeeding trip. In addition to salesmen, some of the more opulent houses send out men who are termed "entertainers," whose business is to entertain eustomers and look well after their financial standing, but not to take orders. The adoption of this rather extravagant custom is not to be commended in a country of such extent as ours, although our travellers here do considerable entertaining.

The committee concluded its report by recommending the Association to consider the propriety of taking some action aiming at the payment of commissions on sales rather than of salaries, and of fixed allowances for travelling expenses.

## THE SOCIETY OF ARTS.

THE arrangements for the forthcoming session of the Society of Arts, which will be the 132nd, have just been issued. The first meeting will take place November 18, and the address will be delivered by Sir Frederick Abel, C.B., F.R.S. &c.

The meetings of the Applied Chemistry and Physics Section will be held on Thursday evenings, January 28, February 11, 25, March 11, April 8, May 13. The Foreign and Colonial, and the Indian Section will each meet during January, February, March, April, and May; and juvenile lectures will be delivered by Professor Silvanus P. Thompson, D.S.C., on December 30 and January 6. The Cantor Lectures will commence November 30, and run through to May 31. The first course will be on the "Microscope," by Mr. John Mayall, jun.; the second course on "Friction," by Professor H. S. Hele Shaw; the third course on "Scientific Teaching," by Professor Guthrie, F.R.S.; the fourth course on "Petroleum and its Products," by Mr. Boverton Redwood, F.C.S.; the fifth course on the "Arts of Tapestry-making and Embroidery," by Alan S. Cole; and the sixth and concluding course on "Animal Mechanics," by Dr. W. B. Richardson.

# ANOTHER PATENT MEDICINE PROJECT.

A COMMITTEE of the American Pharmaceutical Association was appointed last year to frame a draft of an Act which was to regulate patent medicines. Their report was submitted to the late Pittsburg meeting of the Association, and a resolution was come to endorsing the proposal of the Committee that "all proprietary articles should contain on their labels a list of their ingredients." The draft Bill submitted is intended for adoption by any State legislature. To justify their existence, the Committee have made a Bill of quite unnecessary length, but their project is very simple. It is proposed that all proprietary medicines which it is desired shall be sold in the State shall be submitted for registration by the State Board of Health. Every such medicine is to bear on its label, in legible English type, the common or seientifie name of every constituent drug entering into its composition; and not only the name, but also the proportion of every "potent substance" which may be contained. The State Board of Health is to publish, and from time to time to revise, a list of articles which are to be considered "potent substances." Penalties are to be imposed on "any person who shall offer or expose for sale, sell, barter, exchange, or give away any proprietary medicine which shall not comply with the provisions of this Aet."

Such is the method of dealing with patent medicines recommended by the best American pharmaceutical intellect. It is one of those pieces of work which do more credit to the heart than to the head. The authors have got impressed with the sentiment that there is something wrong in the

proprietary medicine traffic, and, like so many good people, they ery out for an act of parliament to bring things to their standard. The proposal is, however, a most impracticable and unjust one. The legislature has no right to demand from any man his trade secrets. If he is carrying on a traffic which can be proved to be nefarious, or injurious, or dishonest, the legislature has the right to stop him. But it is not statesmanship to assume this dishonesty, and then to make a compact with it. The injustice of the proposal will be seen at once by assuming the possibility that a meritorious proprietary medicine may exist, the demand for which has been created by its merits. Surely it is too cool a proceeding to ask that the proprietor shall hand over his formula to all the druggists of the country without any compensation. And when this demand comes from the druggists themselves, there is just the shade of a suspicion of interested motives about it.



Chemical Equilibrium the result of the Dissipation of Energy.

By G. D. Liveing, M.A., F.R.S., Fellow of St. John's College, and Professor of Chemistry in the University of Cambridge.

This essay is the substance of a short course of lectures delivered in Cambridge University. The author states that it has been his object to put in a more concrete form the application of the principle of the dissipation of energy which has been discussed mathematically by Gibbs on the basis laid by the researches of Thomsen and Berthelot.

In an introductory chapter the meaning of dissipation of energy is defined, and it is explained how the maximum degradation of energy may be brought about in a system consisting of masses isolated from all external influences by equalisation of temperature, and by other causes, such as evaporation, diffusion, or a teration of molecular state. The manner in which energy runs down in the formation of solutions is also considered.

The second chapter, on equilibrium in dissociation, is most suggestive, especially the latter part of the chapter, in which the commonly accepted idea that heat is a repulsive force is controverted. The author states: "Heat is a form of energy, and force is not energy. Chemical combinations are reversed at different temperatures, because by the addition or subtraction of energy in the form of heat we are not only altering the whole energy of the system, but also altering the potential of one part of that energy, and thereby disturbing the equilibrium."

The next enapter is a discussion of the manner in which the termination of a reaction is brought about. There is an alternate occurrence of stable and unstable states until equilibrium is attained. This equilibrium corresponds to a maximum degradation of energy, though not necessarily the greatest possible maximum. The termination of the change may be brought about by the dissipation of energy in the form of heat, by the increased pressure of an evolved gas, or by the increased quantity of soluble matter in a solution. The latter condition is referred to as rendering intelligible many of those cases in which the extent of chemical change has been ascribed to the influence of mass.

The nascent state is very ably discussed, with the following conclusion: "The supposition of the nascent state does not help to explain any of the actions for which it is invoked, but, on the contrary, creates difficulties which do not occur without it."

In dealing with the passage from one state of equilibrium to another, the author shows how electric currents may afford opportunities for energy to run down. The effects of light and of contact actions are considered, and the results

brought about by varying the distribution of energy in a system of equilibrium.

The last chapter is on the nature of chemical combination. The author discards the idea of bonds, and considers that the supposition of a special chemical force is unnecessary. He concludes, rather, that chemical combination consists in "a harmony of the motions of the combined atoms, in virtue of which they move and vibrate together, and that such harmony is brought about by the general force in naturewhich compels to an equal distribution of energy throughout the universe." According to this view, the combination of two atoms of the same element would readily take place, because their vibrations are identical. It does not follow, however, that the vibrations of the resulting molecule would be the same as that of the component atoms, and this being the case, it is easy to understand how a change of valancy would arise. To take an example: ferrous iron may be regarded as possessing vibrations corresponding to those of the atom, while in ferric iron we have a different vibration, resulting from a combination of atoms. Apart from theoretical considerations, we have distinct evidence of the fact that certain elements of known similarity in thischemical character possess the power of entering into similar vibratory motions. This is seen in the spectra of these elements. The remarkable analogies between the spectra of calcium and magnesium, for example, are well shown in the beautiful photograph of spectra at the end of the book.

We have said enough to convey some idea of the general character of this most suggestive series of essays; it is impossible in a very limited space to enter into further detail. It may be confidently asserted that this little book will prove extremely interesting to every truly scientific chemist. It is to be regretted that it is not easier reading. The author's style is somewhat involved, and his sentences are often awkwardly long. There are occasional sentences extending to more than a hundred words; and sometimes the author endeavours to convey his meaning in a sentence of more than fifty words without any pause whatever. The subject-matter is essentially abstruse, so that it would require a skilful use of language to convey anything like a clear conception of the views set forth. There are parts of the book in which this clearness is decidedly wanting. All books involve trouble either to the author or to the reader. In this case the reader's share of trouble is unduly large.

We trust that the author will before long publish a more extensive work on this branch, or rather root, of chemical philosophy. The application of dynamical principles in chemistry is opening up a new era in the science, and there is no one more competent to pursue those applications than Professor Liveing.

Chemical Students' Manual. By Herbert L. Buckeridge, F.C.S., A.A. (Oxon). London: Thomas Murby.

Works of this class are so very numerous that one naturally asks, What object has the author in view in presenting another clementary text-book to the student of chemistry? In this case it would appear that the design is to place in the student's hands a book of notes, so that he may not have the trouble of making notes himself, and the lecturer will be saved the time occupied in waiting for his class to commit his words to writing. The idea is ingenious, and if the student could in any way be saved the trouble of understanding the notes it would be perfect. The examination system, of course, goes a long way towards attaining this object, but there is yet something to be done. It is evident that the requirements of examiners have been kept prominently in view by the author.

On pages 26–28 there is a list of the dates of important chemical discoveries. It is somewhat alarming to observe how little progress has been made in the science during the past eighty-four years. In this period the only chemical discovery of note has been the conversion of the elements, oxygen, hydrogen, &c., from one physical state to another. The student has thus only one short note to commit to memory, and the work of all the modern chemists since the time of Davy is disposed of. There are five pages devoted to the purification of natural water, the merits of various sorts of filters, and so forth, but there is not a word anywhere about Mendeljeef's periodic law. The crystalline form of carbon, sulphur, phosphorus, and some other substances,

is referred to, but the student is not given any information

about crystals.

With the aid of this book and of a good memory, it would be quite practicable to pass some of the important chemical examinations without the trouble of making one single experiment, or even of taking a note. There are persons who wish to perform such feats, and in a free country why should they not be allowed to do so?

Lectures on Heat, Sound, and Light: an Elementary Text-book for Students. By Richard Wormell, D.Sc., M.A. London: Thomas Murby.

In this series of lectures the student is brought by easy gradations from the simplest phenomena to the more complex problems of elementary playsics. The author's style is conversational and easy, and he makes frequent use of simple illustrations drawn from everyday life. At the end of the set of lectures on each of the three divisions of the book there is a series of experimental exercises for the student to perform. Most of these do not require expensive apparatus, and they are described in such a manner as to render success easy. This book deserves to occupy a prominent part in the teaching of these important branches of physical science.

A Guide to the New Pharmacowia (1885). By Prosser James, M.D. London. J. & A. Churchill.

Tuis small volume of 108 octav pages was brought out very smartly in less than a month after the appearance of the Pharmacopoia. In it details of all the changes and novelties presented by the Pharmacopoia are described, and to these descriptions are added in many cases therapeutical commentaries. The latter are at the same time concise and comprehensive, and make interesting chapters on the new medicines, mainly, of course, from a medical point of view, but by no means ignoring the pharmaceutical aspect. We have availed ourselves of the permission of the author to include a few excerpts from his work in our DIARY treatise on the Pharmacoporia.

Dr. James somewhat severely calticises some of the minor defects of the Pharmacopeeia, and we do not find any instance of cordial praise. The best features of the book he regards as taken from the U.S.P.; he is sarcastic on the translation of rhamin purshiani cortex by "sacred bark"; on the use of the term semen for calabar bear (in the case of all other cooks are the case of all other cases of the case of the ca seeds semina being adopted): and especially on the tincture of chloroform and morphine, "The sages of the General Council of Medical Council and egistration have," in regard to this, "abandoned their dignity in order to fish the existing state of knowledge from the polluted streams of uns rupulous advertising." Dr. James thinks more articles might have been omitted, but this remark is confessedly made in the interest of studen's. The l'harmacopæia is, however, primarily a guide to precitioners, and not a manual for students, and the latter gentlemen must be good enough to accept medical science as they and it, and wait till they are themselves authorities for the opportunity of simplifying it.

List of Tests. By Hans M. Wilder. New York: P. W. Bedford; London: E. & F. N. Spon. 1885.

THE tests are arranged in alphabetical order, according to the names of the originators, and the book is said to be designed especially for the convenient reference of chemists, pharmacists, and scientists. Within the space of 72 small octavo pages there are 953 test- described. It is needless to say that the descriptions are given in a highly abbreviated form, as for example:—"143. Crumpelitz (alkaloids).—A solution of 1 grain ebloride of zine in 30 ccm. muriatic acid and 30 ccm, water. Colour reactions." As a rule an outline of this sort is of no great practical value; the reader would like to know what are the reactions that the originator of the test has taken the trouble of investigating. Occasionally the mere suggestion of the reaction on which a test is based is quite sufficient for all practical purposes, as in the following case:—"180. Draper (castor-vi'n essential oils).—Evaporate 20 drops as far as possible in a porcelain capsule, and add 5 or 6 drops of nitric acid. After finished reaction add a solution of carbonate of sodium. Odor of cenanthic acid." In a few cases a reference to the work in which the original

description of the test is to be found is appended, and had the author taken the trouble to give this additional information in every case the work would be one of very great value to those for whose use it is designed. At the end of the volume there is an index by subjects which enables reference to be made to all the tests described in the book for any specified substance. Under "siluric acid," "butter," "aloes," "ozone," there is one reference each. Under the heading "glucose" there are forty-three tests referred to.

Chemical Labels. Mottershead & Co., Manchester. Revised edition.

THE publishers state that their design is to supply labels which will be practically useful, and that they do not attempt to embody any system of chemical nomenclature. There are no symbols attached, but there is sufficient room on each label if the chemist desires to write the symbol. The type employed is bold and legible; the paper is good, and it is well gummed. The book contains forty-two pages of about seven labels each, including a number of slips with the words "Commercial" and "Pure." In the case of substances in common use a number of labels are provided. The book scems very good value for the price at which it is offered, viz., 1s.

Elements of Pharmacy, Materia Medica, Therupeutics. By William Whitla, M.D. Third Edition. London: Henry

WE have on several previous oceasions commented on the excellent information conveyed in this now popular manual. The third edition, which had been kept back until the new Pharmacopeia should appear, was produced within a month of the publication of that work. The book is rather a prescriber's than a pharmacist's text-book. The materia medica section is somewhat condensed, but the therapeutics of drugs are very fully treated. Dispensing in its various forms is discussed with a great deal of knowledge, and the elements of prescribing are also made clear. The book also contains a section on non-official remedies which has evidently been written up to date.

A Manual of Practical Analysis (Eighth Edition), by G. S. V. Wills, M.S.C.I., F.R.M.S., &c., Lecturer on Chemistry and Physics at the Westminster College of Chemistry and Pharmacy. London: Simpkin, Marshall, & Co.

In his preface the author states that "The fact that an eighth edition is issued within six years of its first publication is the best proof of its merits"

On p. 68 we find it stated that the yellow precipitate produced by molybdate of ammonium in a solution of phosphate of soda acidulated with nitric acid consists of phosphomolybdic acid. This is not the case; the precipitate so familiar to every chemist of analytical experience is well known to be an ammonium compound. On this fact Sonnenschein has based his delicate test for ammonium salts. Further on we find the statement that no acid but aqua regia has any action upon gold. This requires qualification. acids are stated to be divided into two classes-inorganic and organic, but, as if to save the inconvenience of discriminating between the members of these two classes, we find them all described under the one general heading, "Inorganic." The author's English is not always elegant, nor is he consistent in his terminology. On p. 49 we find "The cause of the explosion which accompanies this experiment is due to the decomposition of the peroxide of chlorine into its elements by the heat." On the same page a salt is called both chlorate of potash and chlorate of potassium; we find also molybdate of ammonium and molybdate of ammonia. At the foot of p. 11 there is a sentence unfinished. A more serious error is to be found on p. 7. In informing the student how to recognise ammonia gas, the following is one of the tests given: "Hold a piece of glass rod, moistened with strong hydrochloric, nitric, or sulphuric acid near the mouth of the tube; white fumes of chloride, nitrate, or sulphate of ammonium sulphate arc formed." If the student tries the experiment with sulphuric acid and fails to observe the fumes of ammonium sulphate, let him turn to the author's preface and persevere, for there he will find a sentence which cannot fail to convince him that it is to his reagents or to himself that failure

is to be attributed. Mr. Wills assures the student that "Nicety and careful attention to details, combined with the use of the best chemicals, will ensure success, as every reaction is given from actual experience." We must assume that this test for ammonia which exhibits such nicety and careful attention to details has survived from the seven preceding editions; let us hope that it will be climinated in the ninth edition.

The Extra Pharmacoparia. By Wm. Martindale, F.C.S. Medical References by W. Wynn Westcott, M.B. Fourth Edition. London; H. K. Lewis.

THE publication of the new Pharmacopoia has necessitated a complete revision of this work, which has taken a wellrecognised place in medical and pharmaceutical literature as a supplement to the official volume. Many remedies which were "extra" a few months since are now authoritatively admitted as legally qualified medicines. This does not, however, by any means destroy the value of the "Extra Pharmaeopæia;" indeed, this work is now more useful than ever. Besides giving much information concerning remedies still non-official, the formulæ of the Pharmacopæia are elucidated and commented upon, and a secondary list of drugsa sort of extra "Extra Pharmacopæia"—is now added. As an introduction to this edition Mr. Martindale gives a review of the new l'harmacopœia, in which the defects of the volume, including such as do admittedly exist, and such as are so regarded by himself, are made the most of. The review serves to show, too, how much the editors of the Pharmacopæia have been indebted to the "Extra." Among the claims put forward on behalf of the latter is the proud one of having committed one of the unfortunate errors. The solubility of apomorphia in water, which is stated to be 1 in 7, is presumably copied from the last edition of the "Extra Pharmacopæia." It should be 1 in 35.

The new edition contains much new matter, but it is still printed and bound in such a form as to be conveniently carried in the pocket. It is an undoubtedly successful work.

MESSRS. CROSBY LOCKWOOD & Co. will shortly publish "The Artists' Tables of l'igments," showing their composition, conditions of permanency and non-permanency, adulterations and effects, &c. By H. C. Standage.

M. Mehu has commenced an analysis of the British Pharmacopæia, 1885, in the *Journal de Pharmacie et de Chimie*. The processes for the principal alkaloids and preparations are given, but the author does not at present offer any criticisms.

One of our large ehemical firms send us a letter received from Mexico, in which the writer asks them to let him know the price of rattlesnake oil per ounce; the best way to take it, to pack it, and to ship it; and to say whether any apparatus is required.

For the next year's Colonial and Indian Exhibition the sum of 198,670*l*. has been guaranteed. The Indian Government guarantees 20,000*l*, that of Canada 10,000*l*., the Governments of New South Wales, Vietoria, and New Zealand 5,000*l*. each, and those of South Australia, Queensland, and the Cape of Good Hope 2,000*l*. each. Among private firms Messrs. Huntley & Palmer, J. S. Fry & Son, John Moir & Son, the Morgan Crucible Co., Orlando Jones & Co., Peck Frean & Co., Price's Patent Candle Co., and J. Schweppe & Co. guarantee 1,000*l*. each; Barnett & Foster, Spratts Patent, G. B. Kent 500*l*. each, and other firms sums downto 50*l*.

THE ALIZARINE INDUSTRY.—In consequence of the establishment of many new alizarine manufactories, and of the bad effect upon business of the inevitable excessive production, the firms who contracted the alizarine convention four years ago have, at the instance of the three largest firms, agreed to its dissolution. In spite of the lowness of prices the withdrawing firms have announced a further reduction, so that cost prices have now been reached, the object being to eompel some of their rivals to leave the field. The position of this industry is made worse from the fact of many manufactories having been started in England, a country which used to buy more than half the production of the German works. This has caused the foreign trade to be very dull.—Kuhlows.

## Trade Notes.

MESSRS. E. SCHWENKNER & Co. have removed from 37 Walbrook to 47 Leadenhall Street, E.C.

A. P. Towle & Sons, of Back Piccadilly, Manchester, have purchased all the proprietary rights of the Thornton Hair-restoring preparations, and in future they will manufacture them at their own address.

THE petroleum of the Binghampton Oil Refining Company which we noticed last month corresponds to the "Paraffinum molle" of the Pharmacopæia, not to the "Paraffinum durum" as aecidentally stated.

THE firm of William Bush, manufacturing and wholesale chemists, of Walworth, has been dissolved, but will be continued by Messrs. John N. Bush and Edward T. Bush under the style of William Bush, Son & Co. The debts of the late firm will be discharged by Mr. William Bush.

Messrs. Barnett & Foster have sent us their newlyissued Catalogue, which is a bulky book of some 134 pages and an appendix of 26 closely printed pages of testimonials. The Catalogue, which is very neatly got up, contains much useful detailed information as to the specialties made by the firm.

Messrs. Goodall, Backhouse & Co.'s Household Almanae for 1886 is being issued to the number of twelve millions. It is a neat, illustrated, compact little book of 32 pages with coloured cover, and its issue has involved the consumption of 285 tons of paper. The whole of this enormous edition has been presented gratuitously to chemists, druggists, Italian warehousemen and grocers throughout Great Britain and the Colonies.

The reference to Messrs. John Jakson & Co., of Mitcham, in an article on "The Mitcham Harvest" in last month's issue, conveyed an impression which was not quite accurate. The paragraph may appear to suggest that Messrs. Jackson & Co. sell only the very expensive, repeatedly rectified, oil of peppermint, whereas, as is shown in their advertisement, they supply not only the very fine article, but besides various qualities at various prices. Moreover, it ought to be stated that their prices quoted are those for single bottles, while for wholesale quantities a considerable difference is made.

WE have the pleasure of including among our advertisements this month an important series of announcements issued by the united firms of Evans, Sons & Co., of Liverpool, Evans, Lescher & Webb, of London, and Evans, Mason & Co. (Limited), of Montreal. The immense resources at the command of these houses have enabled them to carry out their various enterprises on a scale which ensures thoroughness and economy. This is exemplified by the manner in which they have established the trade in Montserrat limejuice in this country. Of this fine product they imported last year over 180,000 gallons. Under the trade mark of "Savars" they have built up a considerable business in all kinds of druggists' sundries; and their pomades, perfumery, feeding-bottles, chest-protectors, and household requisites generally, are second to none in the market in quality or style of production. Goods of this kind are, we believe, supplied to druggists only. It would be superfluous to speak of their laboratory products, but mention may be permitted of their line of fluid extracts. These articles will, without much doubt, in course of time replace other pharmaceutical products. In a well-made fluid extract, 1 minim, as a rule, represents 1 grain of the drug from which it is made; and tinctures and infusions can be made from it with much more accuracy than by following the various processes for the quite unnecessary variety of preparations of certain drugs which the Pharmacopeia still contains. Messrs. Evans first made these fluid extracts in Canada; now they make them on a large scale in their Liverpool laboratories.

## COMPARISON OF THE PREPARATIONS OF THE BRITISH AND INTERNATIONAL PHARMACOPEIAS.

I N the following table the names given are those of the B.P. The B.P. strengths of liquid preparations are given in fluid parts, but when such strengths are much at variance with the strengths based on weight, the strengths by the latter method are given. The preparations of the International Pharmacopæia are all by weight.

NAME OF PREPARA	TION		BRITISH PHARMACOPETA	INTERNATIONAL PHARMACOPORIA
Acctum cantharidis			1 in 10. Menstruum, 40 per cent acetic acid 1	1 in 10. Menstrunm acid and spirit. Contains 4 per cent, acid
, seillæ			1 in 8. Dilute acetic acid 1	1 in 10. Menstrunm as above
Acidum aceticum				Sp. gr., 1029. 204 per cent. HC.H.O
" hydrochloricum				sp. gr., 1·120. 24·24 per cent. HCl
, dlutum		• • •		5p. gr., 1 060. 124 per cent. HCl
" hydrocyanicum dilutum " nitrienm				The same
n ndibitum				Sp. gr., 1·300. 48 per cent. HNO >p. gr., 1·130. 21·42 per cent. HNO.
" phosphoricum dilutum				sp. gr., 1 093. 16 66 per cent. H.PO.
" sulpharicum				Sp. gr., 1.840, 96 per cent. H <sub>2</sub> SO,
,, dilutam				Sp. gr., 1:117. 16:66 per cent. H <sub>2</sub> SO <sub>4</sub>
				~p. gr., 0.725. 94 per cent., (C <sub>2</sub> H <sub>1</sub> ) <sub>2</sub> O
Aqua lanrocerasi Argenti et potassii ultras	••			The same
Chloroformum	••			The same
Cinchonæ cortex				Sp. gr., 1490 to 1500 Pale bark, 1 per cent., yellow, 2 per cent., and
		• ••	of which half is chinchouidine and quinne	red, 25 per cent. of quinine
Collodinm vesicans			Cantharidis, 1 in 5; pyroxylin, 1 ln 20. Made of with acetic ether	Cantbaridis, 1 in 1. Pyroxylin, 1 in 20. Made- with other
Emplastrum belladonne			1 root extract in 5. Resin and soap plasters 1	l green extract in 10. Lead plaster
, cantharilis			1 ln 3	Same, but different basis
umi	• • •			Saine, with yellow wax
Extendent comist (f.1)		• • •		in 10. Lend plaster
bulls lonn of st	**			Same, but albumen, &c., precipitated with alcohol
n a colo ic			The second secon	Sime, but albumen, &c., precipitated with alcohol- From root, with proof spirit
, cunabis indica				The same
n colocynthides comp.				Contains seammonium, otherwise practically same as B.P.
			Prepared same as ext. aconiti	same as above
" filicis maris				Same us B.P.
hyoseyami	• •	• • •	The state of the s	Same as above
onii	•			Similar, but extract not standardised
,, opti			Water extract, 100 of opium yielding 50 of pertract	The same, but narcotine removed
				As B.P.
" stramonii				Exhausted with proof spirit, but oil not
Linimentum chloroformi			of seed with proof spirit	removed
Liquor ammoniae				l in 10 (olive or almond oil) The same
" autimonii chloridi				Practically the same as B.P.
" arsenicalis				ome strength. Flavoured with spt. melisse co.
omonici kulus 11			(red) with tr. lavand co.	No colour
n arseniei hydrochleric is n atropia sulphatis				Some as B.P.
" ferri pere dori li		• ••		same as BP.  Sp. gr., 1.26 to 1.30. Made from the salt. Con-
			Sp gr., 1420. 40 per cent. (by weight) Fc <sub>2</sub> Cl <sub>a</sub> , S and a little free HCl	tains 15 per cent. Fe.Ch.
" plumbi snbacetatis			Sp. gr., 1.275. 10 acetate and 7 oxide in 51 b;	Sp. gr., 1.230 to 1.240. 15 acetate and 5 oxide in
" sodii arseaiatis			weight 1 in 100 by weight	50 by weight I in 500. (Pearson's solution)
Lotio hydrargyri flava				l in 300
n nigra				l in 100
Opium			After drying, contains 95 to 105 per cent.	Moist contains 10 per cent, morphia
Pilnla hydrargyri			morphia	
" ferri iodidi			1 / 11 T to 7	same Almost same, but different basis
Pulvis ipecacnanhæ co				Same as B.P.
Spiritus ætheris				ether ln 4. This as Hoffmann's anodyne, with-
			Heffmana's anodyne is spt. aether. co. with ol.	out ol. vini.
" " nitrosi			vini 2 to 27 per cent. et. No. 2	About four times stronger than B.P., and pre-
, chloroformi			1:-00 (0	pared differently I in 20
" reetificatus				Sp. gr., 0.8335. 85.8 per cent, C <sub>2</sub> H <sub>8</sub> O
" tenuior				Sp. gr., 0892. 615 per cent. C.H.
Syrupus chloralis			1 grain in 6 minims. (By weight, 1 in 7) 1	1 in 20
" ferri iodidi			43 grains, FeI <sub>2</sub> in 1 g. 3j. (By weight, 5.7 per 5 cent)	5 per cent. FeI <sub>2</sub>
papaveris				l in 10

Name of Preparation	BRITISH PHARMACOPŒIA	International Pharmacopeia
Tinctura aconiti  ,, aloes , belladonnæ , camphorae co. , cannabls indicæ eantharidis , coiclicie seminis , conil , digitalis , ergotæ , hyoseyami , iodl , jalapæ: , lobellæ , nucis vonicæ  opii , sabinæ , scillae , stramonli , veratri viridis  Trochisci ipecacnanhæ , sautoninæ Unguentum aconitini , antimon, tart , beiladonnæ , cantharldis , injdrargyri , ammoniati , injdrargyri , ammoniati , subchiorldi , sabinæ , subchiorldi , sabinæ , colchici , pecacnanhæ , colchici , pecacnanhæ , opii	1 in 8. (By weight, 1 in 67) 1 in 40 1 in 20. (By weight, 1 in 184) 1 of opinm in 240. (By weight, 1 in 201) 1 extract in 20 1 in 80. (By weight, 1 in 736) 1 in 8. (By weight, 1 in 736) 1 in 8. " 1 in 8. " 1 in 8. " 1 in 8. (By weight, 1 in 738) 1 in 40. (By weight, 1 in 736) 1 in 8. (By weight 1 in 1736) 1 in 8. (By weight 1 in 1736) 1 in 133. (By weight 1 in 1736) 1 in 16 (By weight 1 in 1736) 1 in 8 (By weight 1 in 1736) 1 in 9 1 in 5 1 grain in each 1 in 60. (Benzoated lard) 1 in 5. (Simple ointment) 1 root extract in 10 1 in 7 1 in 2 nearly 1 in 10 1 of 11g in 13 nearly 1 in 8 1 in 63 1 in 3½ 1 in 63 1 in 220 1 in 5 1 in 200. (From acctons extract) 1 in 20.	l iu 10 l in 5, without liquorice l in 10 l in 200, but only 3tls as much camphor l herb iu 10. (About half B.P. strength) l in 10 l in 15, without KL l in 5 l iu 10 Practically same. Made with same meastrum l in 10 l in 5. (Prepared lard) l green extract in 10 l in 5 l in 3 The same l of Hg in 3\frac{1}{4}. Made in the cold lin 20. Different basis l in 10 Almost same strength, but prepared from green extract, or alcoholic extract of dried leaves l in 53. Different basis l in 250. l in 10 l in 10. (Maceratiou in sherry) l in 10. With suffron additional

## LICORICE IN YORKSHIRE.

THE subjoined report on the cultivation of licorice in Yorkshire has been sent home by the United States Consular Agent Whitman, of Huddersfield, in compliance with the request of the State Department. The importations of licorice root into the United States amount to nearly 40,000,000 lbs. annually, and are valued at \$800,000. The American consul's report will doubtless encourage the native production of the article. Mr. Whitman's article is as follows:—

## Licorice and its Uses.

Before proceeding to give an account of the cultivation of licorice in this district, it may not be amiss briefly to quote from several authorities some facts regarding the introduction of the plant into England, its other habitats, uses in the Pharmacopæia, &c.:—

Licorice is cultivated throughout the warmer parts of Europe, especially on the Mediterranean shores, and its geographical limits travel eastward through Central Asia to China, where its cultivation is also prosecuted.

In the United Kingdom it is grown in Surrey and Yorkshire. The roots for use are obtained in lengths of 3 or 4 feet, and averaging in diameter from \( \frac{1}{2} \) to 1 inch. . . . The root is an article of some commercial importance on the Continent.

Stick licorice is made by crushing and grinding the root to a pulp, which is boiled in water over an open fire, and the decoction, separated from the solid residue of the root, is evaporated in copper pans till a smilleient degree of concentration is attained; after which, on cooling, it is rolled into the form of sticks or other shapes for the market. The preparation of the juice is a widely extended industry along the Mediterranean coasts, but the quality best appreciated in the United Kingdom is made in Calabria, and sold under the name of Solazzi and Corigliano juice. The licorice grown in Yorkshire is made into a confection called Pontefract cakes.

Licorice in various forms is a popular remedy for coughs, and it is largely used by children as a sweetmeat.

It enters into the composition of many cough lozenges and other demulcent preparations, and in the form of aromatic syrups and elixirs it has a remarkable effect in making the taste of nanseous medicines, a property peculiar to glycyrrhizin.

A considerable quantity of licorice is used in the preparation of tobacco for chewing.

Commercial licorice paste is frequently much adulterated, and often contains distinct traces of copper, apparently derived from the vessels in which the juice is inspissated.—From the ninth edition of "Encyclopædia Britannica."

Referring to the writer's statement as to its growth in Surrey, I quote from Murray's Handbook to that county page 101:—

At Mitcham we are in the midst of the great Surrey "flower-farms," The soil of the parish is a deep black mould, some hundred acres of which are covered with plantations of lavender, rosemary, mint, peppermint, licorice, chamomile, and other herbs for the use of the great London druggists, perfumers, and distillers. . . Mitcham has been famous for its plantations of medicinal herbs for the last century.

From information of a reliable character obtained at Pontefract, I gather that the plant is cultivated only at Mitcham as regards the county of Surrey, and, as appears from the above account, in but a small way for near consumption.

Referring to the Pontefract industry, the only important one in the British Isles, Murray, in his "Handbook for Yorkshire," third and last edition, 1882, gives the following account:—

Licorice was first cultivated in England in the reign of Elizabeth, (Stowe). . . . The plant, very graceful, with feathery leaves, is planted in ridges, and does not come to perfection until the fourth year.

The sandy soil snits it, and the fibrous roots are sometimes 10 or 12 feet deep. These are dng in antumn, and pounded in the following winter; the juice thus extracted is boiled down and mixed with gunn arabic and other ingredients, and mixed into large cakes. . . The trade is slowly decaying since Spanish licorice is now imported free of duty.

As showing how widely diffused the growth of this plant seems to have been, I find in an account of its introduction into England, given by McKenzie's Cyclopædia (unfortunately I cannot quote the article, not having the volume in the town), that it orginally came from Germany. If true, the plant must indeed be a hardy one, since the German winters often rival those of the United States in severity. Further on I shall again refer to the question of climate, naturally a very important one to growers in the United

Messrs. Chambers give an excellent account of the plant in their popular Encyclopædia, from which I may pertinently furnish a few extracts :-

The roots of licorice . . . are a well-known article of materia medica, and were used by the ancients, as in modern times, being emollient, demulcent, very useful in catarrh and irritation of the mucus membrane.

The roots of the common licotice are chiefly in use in Europe. . It is cultivated in many countries of Europe, chiefly in Spain. . . . The 100ts are extensively employed by porter brewers. They are not imported into Great Britain in considerable quantities, but the black Inspissated extract of them (black sngar or stick licorice), is largely imported from the South of Lorope in rolls or sticks packed in Lay leaves or in boxes of about 2 cwt., into which it has been run.

Licorice is propagated by slips, and, after a plantation has been made, almost three years must clapse before the roots can be taken up for use. The whole of the roots are then taken up.

Licorice requires a deep, tich, leose seil, well trenched and mannred; the roots penetrating to the depth of more than a yard, and straight taproots being most esteemed.

The old stems are cleared off at the end of each season, and the root-stalks so cut away as to prevent evergrowth above ground next

The plant is propagated by cuttings of the root-stalks.

The root of the prickly licorice (Glycyrrhua echinata) are used in the same way, clicity in Italy and Slc ly, Rissia, and the East. The only American species is Glyczirha:a lepidi a, which grows in the plains of the Missourl.

## Cu'tivation of Licorice in England.

Thinking that something might be learned from persons in the business residing at Pontefract, I visited this place armed with letters of introduction to several of the largest manufacturers there. Before entering on the method pursued for making the so-ealled "Pontefract cakes" from the licorice juice, I, perhaps, cannot do better than describe the system of cultivation, soil, &c., as obtained on the spot from three practical men, two out of the three being growers of the plant, which I was then told had been introduced into Pontefract by the monks, whose simple pharmacopæia embraced licorice-root among the large number of herbs prepared by them for medicinal purposes.

The soil about Pontefract is well suited for the growth of the plant, being of a sandy, loamy character, though from all I could hear in this particular, a rich black soil would answer equally as well, the only requisite being considerable depth, to allow of the downward growth of the roots

The beds are prepared by being well trenched, the width of trench and bed averaging 3 feet, having the appearance, when finished, of wide celery-beds. Commencing early in April or late in March, a top-dressing of good stable-manure is applied, and then lightly covered over, leaving the trench, perhaps, 6 inches below the level of the raised bed. and suckers, slips or runners, specimens of which (Nos. 1 and 2) are herewith forwarded to the Department, are then lightly stuck into the soil by one person-in the field I saw a girl was employed in this task while another follows along with a small spud or (local) dibber, with which holes are made at a distance of some few inches apart, and the buds and suckers inserted therein, say 4 inches below the surface, that is, the tops covered by about 4 inches of soil.

This forms the double crop, that is, the buds growing downwards producing licorice-roots (specimen No. 3), the suckers forming buds for future planting, width of bed permitting of cross rows of plants. The buds and suckers are left in the ground for three years and a half, no crop being obtained until the September following the fourth spring. The first manuring is sufficient, the plants being weeded as required during each snmmer. They do better in a hot, dry summer, after the first season, the last five or six wet years before that of 1884 not having proved good ones for the crop.

Frost, it seems, does not haim the plant, though in this matter I judge that our very severe New England winters might prove harmful, the coldest season in Yorkshire seldom showing a greater degree of frost than several degrees above zero, though the ground is often frozen solid to some depth. I was assured that the plant is very hardy, had no worm or parasite, and gave little trouble in its cultivation. Having the trenches virtually idle for the first two years, since the tops of the plants do not until the third years show any luxuriance of growth, the universal custom is to plant the trenches for the first year with "ash" potatoes, described as being a potato with a very small top, since the ordinary potato vine would overshadow the staple, which, of course, is the grower's prime care. For the second year cabbages are grown between the beds; but for the third and fourth (that is, six months) the trenehes must lie fallow, as the licoriceplant is then luxuriant, and presents in the summer months the appearance of a plantation of young ash trees, for instance.

The grower plants a fresh erop in the spring of each year, and in the fall of the same year harvests the one of three years and a half's growth. The only labour required beyond this is that the beds in all their stages must be kept free from weeds, and in November or December, when the sap is out of the plants, they must be cut down. If a winter proves unusually severe the tops of the plants may be protected by a light covering of earth. No irrigation is required even in

the driest summer.

## Gathering and Preparing the Root.

The mode of gathering the root is as follows, namely:—The trench, not the bed, must be dug down to a great depth, thus exposing, without injuring, the roots, and the whole plant carefully taken out of the ground. The earth from the second trench is thrown into the first, and so on, to the other side of the field.

The roots are placed in dry cellars, after removing the tops and suckers, the latter serving for the next spring's crop to produce "bud"-that is, roots in their early stage for another year, sand being used to cover the roots. After the roots are dry they form the ordinary yellow liquorice for producing the juice of commerce, except a small portion of the top of the root next the bud. This, it appears, is not so valuable as the rest, and hence is separated from the root and disposed of to be ground into powder (specimens 4 and 5), which is sold to chemists, and by them retailed for medicinal purposes, for mixing with stout and beer, and as a remedy even for horses in certain cases of sickness. That part of the plant above the ground seems to be of no value except for burning.

The three and a half years' sucker which is gathered with the lieorice plant has now produced "buds," which are reserved for planting in the following spring, and the new suckers also to be planted have been propagated from the old root, and are cut off from it before storing it. To preserve these "bads" through the winter they are put either into a dry cellar, and, according to McKenzie, covered over with rotten dung, or, as in Pontefract, "pied," that is, made into a mound out of doors, and well covered over with earth or moist sand.

They seem in this way successfully to endure the cold, wet winters of Yorkshire.

## Rent of Land, Sc.

Some particulars I gleaned as to rent of land, &c.: \$30 per aere is the common rent for licorice land, the usual rent for cereal lands being \$10 at present. One man and a boy can carry on several aeres, but the work is hard during the planting season.

One informant, Mr. David Longstaff, who has been very many years in the business, stated that he considered \$500 a liberal estimate to allow for "laying down" an acre from the start to yield of the first erop. He gave rent as \$120 out of this, saying that the two crops of ash potatoes and cabbages hardly more than recouped the grower for his trouble, seed, &c.

## Cultivation of Licorice in the United States.

Mr. Longstaff spoke most hopefully of the introduction of the plant into many of our States, declaring that in Spain it grew wild in great abundance, owing to the hot climate, while he never knew it to be injured by worm, parasite, or frost.

The rainfall of Pontefraet, I should say, is, of course, con-

siderably more than that of many of our States.

Mr. Longstaff corroborated what I had heard from others—that the difficulty would be to obtain buds in sufficient numbers to furnish our would-be growers with seed. He stated that some time ago he had endeavoured to obtain 500 buds for a gentleman in London who wished to try some experiment with them, and it was only with considerable difficulty that he finally got them.

No one seemed to think there was any way of planting by seed alone—at least, from the cultivation of the plant in

England.

As regards export to the States, Mr. Longstaff said that all the licorice grown in Pontefract was used in this country by chemists, &c., and that "Spanish juice," as now admitted free of duty (it paid duty up to ten years ago), was so cheap that no English-grown licorice was now crushed and made into the material for Pontefract cakes, &c. In fact, he thought the cultivation of the plant had decreased in the neighbourhood by 100 acres since the large importation from Smyrna and Spain duty free.

Though some little jealousy may exist as to explaining the growth, &c., of the plant, 1 was assured by Mr. Longstaff that the process described to me, and partly witnessed, was a simple one, the great secret of the trade being the way in which the Spanish juice is boiled and then compounded for

being made into cakes, &c.

## Manufacture of Licorice in England.

Gathering from the general request of the Department for information as to the uses of the plant that some description of the method of manufacture of the erude product into the sweetmeat may not be unwelcome, I will state what I learned from the largest manufacturer there, Mr. Hillaby. This gentleman received me very kindly, and, after some general information as to the growth of the plant in Pontefract, stated that the manufacturers depended for their supplies entirely on Spanish and Smyrna juice, samples of which, Nos. 6 and 7, I enclose. This extract, inspissated from the plant either in its wild or cultivated state, comes to them in large packing-cases of 2 cwt. each, the cases securely dovetailed and lined with paper to avoid leakage in case of heat—the juice being really a solid plastic mass of a dark brown colour, feeling like tar and inclined to run if subject to great summer heat. It may, indeed, be run into these cases (ride quoted account). This juice, as I gathered from Mr. Hillaby, could not be obtained from the Pontefract roots, partly owing to their small size, and partly because it paid growers better to sell to chemists, &c., who found a ready market for the roots as they were.

I judge, therefore, that our hot summers would produce equally large roots with those crushed in Spain, so that this product, if now largely imported into the United States, could be obtained in paying quantities from the home

growth.

Understanding this juice to be unadulterated, I presume there is no secret in the crushing of the roots to furnish it, though I found no one who seemed ready to explain the sort of machine formerly used, and all that I can hence offer on this point is found in the quoted accounts previously given.

Explaining very courteously to me that the mixing and boiling process was a secret, Mr. Ilillaby was good enough, however, to show me through his extensive premises, in order that I might see the process of manufacture after the juice was properly boiled and mixed for being made into cakes. In the first room I found large masses of the "juice," now perhaps more properly called embryo Pontefract cakes, spread on heavy tables, and there rolled by women as dough is worked. This mass was then rolled ont by a machine into thin sheets, laid on trays, and removed into a room at a temperature of about 100°, and there left until the following morning, when it was cut out, stamped by machinery into various forms, including the well-known "Pomfret cake" (sample No. 8), which holds its own, with many other novelties of design, such as letters of the alphabet, fluted sticks, &c.

The sweetmeat, as it has now become, is again subject to a high temperature to "skin over," and is then packed in eard-

board boxes, which are placed in wooden cases and sent off to all parts of the British Isles and the colonies.

Mr. Hillaby's manufactory is fitted up with machines entirely of his own invention for the conversion of the crude product into Pomfret cakes, &c., to the perfection of which he has devoted the best years of his life, the result of which is an extensive business and an increasing demand for bis special make.

Since writing the above I have obtained the following

additional information from Mr. Longstaff:-

1. The average cost of Spanish or Smyrna juice is about \$11 per ewt In consequence of the low price of foreign juice there is none now made in England.

2. The inferior part of the root, ealled the "elumps," is ground into powder [ride sample Nos. 4 and 5]. A much finer powder is made from the fluest root (decorticated), and is used for medicinal purposes. The main part of the root is sold in sticks, of which a considerable quantity is eonsumed by children.

3. The average price of buds and runners is about \$3 per 1,000. The grower must wait until the erop is ready before the buds produced from the runners are available, being taken up with the erop.

4. If any grower writes to me I will, as you request, do my best to procure for him a sufficient number of buds for an experiment.

5. The approximate cost of an acre of licorice on new ground is about \$450, which I arrive at as follows:—

Trenching and preparing land Forty thousand buds, at \$2.50 Planting and mauure Four years' rent and rates (taxes)	••			\$80 100 85 125
Four years' interest on above, say				390 75
Total		••	••	465
Average produce of one aere of at \$14	lieoriee,	45 	ewt.,	630

This calculation is ou the assumption that this is the first crop of licorice, the cost of preparing the land afterward being about one-balf.

The value of the buds will fully repay the cost of cleaning, taking up, &c.

The rent is calculated at \$30 per acre.

## A PHARMACIST'S NOTE-BOOK.

## BUXUS versus CINCHONA.

TOWARDS the end of the eighteenth century some preparation of the Box shrub (Buxus sempervirens) enjoyed a singular reputation throughout Europe; but it was under a fancy denomination. An individual (whose name, we believe, was Hoffmann) possessed a secret remedy for ague, or intermittent fever, and obtained great notoriety by its means. Everywhere authentic cures were quoted by hundreds, and the subject made so much noise in the world that it got spoken of at the court of the Emperor Joseph II. After a while the Emperor determined to purchase the secret remedy in question, which he did for the sum of one thousand five hundred florins. His object was to publish the secret, in order that the whole of his subjects might benefit by it. But when people learnt that the celebrated remedy merely consisted of a decoction of the common box tree—an object of familarity and indifference in everyone's garden—nobody would place any confidence in the medicine. The remedy which had become so notorious whilst its name was withheld now soon ceased to be used at all: the ungrateful public sought for other febrifuge medicines. In the course of a few years einchona bark arrived, and the Buxus sempervirens was rarely or never alluded to.

It is not improbable, however, that, though box itself may never come again prominently forward in pharmacy, its active principle, *Buxine*, will do so. Of recent years the tendency to employ the active principles of plants instead of the plants themselves has been growing, and physicians have begun to perceive that these pure and simple medicaments can be given more safely and more efficaciously than the old com-

plex decoctions, extracts, and tinetures, &c.

Buxine is the active febrifuge principle of the box shrub, and as such it is not new to medical science. In Spain, Italy,

Switzerland, France, and the South of England Buxus sempervirens grows spontaneously, forming in many places small forests or woods. Even in the immediate neighbourhood of London we have a locality named "Box Wood." The leaves of the shrub have a peculiarly nauseous, heavy, slightly aromatic odour. They have been occasionally used to adulterate senna leaves, and at the dose of two to three ounces in decoction in a quart of water they are somewhat purgative, also at the dose of 40 to 50 grains in powder.

No doubt the febrifuge action of box is quite as real now as in the days when the Emperor Joseph II. gave fifteen hundred florins to find it out; and some French practitioners still prescribe it in form of the powdered leaves—30 to 40 grains being given in an appropriate vehicle at the commencement of an attack of ague. According to Dr. Saffray this is the best mode of administering it. A notable improvement, he says, is manifest after the first doses, and in the course of a few days the patient is perfectly restored to health

#### PREPARATION OF BUXINE.

The active principle of Buxus semperrirens, to which it owes its febrifuge qualities is an alkaloid known as buxine. In 1854 Conerbe, an eminent pharmaceutical chemist, described this alkaloid as a non-crystalline mass, having a very bitter taste and causing a patient to sneeze, but less violently than veratrine does. Buxine turns red litmus-paper blue; it is almost insoluble in water, soluble with difficulty in ether, but very soluble in alcohol. Nitric acid decomposes it. Conerbe prepared it by making an alcoholic extract of box, dissolving this extract in water, and boiling the liquid with magnesia. The precipitate was dissolved in alcohol, as much as it would, the tincture decolorised by animal charcoal, filtered, and then evaporated. The salts prepared with this buxine are very bitter, and with alkalies they yield a gelatinous precipitate. The sulphate forms crystalline grains. The alkaloid itself was shown by Conerbe to be capable of crystallising, if the resinous matters which always accompany it be destroyed by treating the impure sulphate of buxine with a little nitric acid. When the sulphate thus purified is decomposed by an alkali the buxine obtained is susceptible of crystallising.

The Italian chemist Barbaglia gave another process for preparing buxine about the middle of the year 1871. He takes the leaves and stalks of the box tree and treats them with dilute sulphuric acid in the usual manner. The acid solution is precipitated by excess of carbonate of soda or carbonate of lime; the precipitate is collected and dried at a very moderate temperature. It need not be absolutely dry. It is now acted on by absolute alcohol. The latter is withdrawn by distillation, and the residue again submitted to the action of dilute sulphuric acid. This second acid liquid is also precipitated by an excess of carbonate of soda or carbonate of lime at a temperature of 40° to 50° C. A current of carbonic acid gas is then passed into the liquid, which redissolves the buxine as bicarbonate, and separates a resinous substance. The solution of bicarbonate of buxine is neutralised by ammonia, which separates the pure buxine in a perfectly white condition

feetly white condition.

This process might prove applicable with advantage to the extraction of other alkaloids.

## DANGERS OF ILLICIUM RELIGIOSUM.

It is worth while to record a curious occurrence (though it will be well remembered by many readers) which took place a year or two ago at the time of our visit to the Netherlands Society for the Advancement of Pharmaceutical Science. Just previously the little Dutch town of Leeuwarden was thrown into a state of considerable excitement by the outbreak of certain pathological accidents, which were, without much difficulty, traced to the use of some milk that had been flavoured, according to custom, by the seeds, or rather fruit, of Illicium anisatum, a plant well known on the Continent as Badiane or Anis étailé.

In a very short time it transpired that two worthy pharmacists of that town had each received from Amsterdam a quantity of these seeds, which on careful examination were found to be abundantly mixed with those of another allied species of *Illicium*. As both these gentlemen happened to be members of the above-named society, the matter was

brought forward at the meeting just as we arrived, and a commission was at once charged to make due inquiries and report upon the case.

The accidents referred to consisted in irritation of the stomach and mucous membranes, followed by violent vomiting and diarrhoea; these symptoms were observed with all the persons who had partaken of the milk which had been flavoured in the manner indicated. Now, as the fruit of Illicium anisatum has been in use for many long years as an aromatic flavour, and has never been known to produce any discomfort, the occurrence attracted particular notice. A member of the commission determined to try the effects of the aromatised milk upon himself. For this purpose, however, he prepared the milk in his own house with the product of his own pharmacy; in the course of a few hours he had a violent fit of vomiting, and was very poorly all day, whilst a child of six years of age, who had drunk some milk flavoured with the pure drug, experienced no discomfort whatever. This was followed by numerous experiments on frogs and rabbits; then a partial analysis of the two kinds of fruit was effected, works on chemistry, toxicology, and materia medica were duly pulled from the shelves and consulted. Finally it was concluded that the Illicium anisatum received from Amsterdam had been accidentally or purposely mixed by the Japanese merchants with the toxic fruit of the Illicium religiosum, an allied wild species. Probably they were not aware of the toxic properties of the latter.

## ENVELOPING-PAPER.

It was during this visit to Holland that we found Professor van der Burg and the editor of the Niew Tydschrift enthusiastically set upon a series of experiments having for their object to test the virtues of the varions kinds of paper actually in use for enveloping medicaments and pharmaceutical products in general. They were determined to ascertain what difference, if any, there existed in this respect between common letter-paper, filtering or blotting paper, parchment paper and paraflin paper, paying due regard to loss of volatile matter, moisture, aroma, &c., and absence of deterioration in substances which were enveloped respectively in these different kinds of paper. It would take a pamphlet of some hundred pages to describe all these experiments, but the conclusion arrived at may be stated in a very few words: it was found that paraflin paper is very decidedly superior to all the others in preventing loss of weight, flavour, or aroma in the substances preserved between its folds.

Next to paraflin paper came ordinary note-paper (writingpaper), then parchinent paper, and lastly filtering-papers and

blotting-paper.

In packing pharmaceutical products it is therefore best to employ paper which has been treated with paraffin—and the same applies, of course, to perfumery articles—in order that they may preserve their weight and aroma in transit or whilst kept in stock. Doubtless if the paraffin employed has beer previously made to dissolve about 1 per cent of salicylic acid a still superior result would be obtained, as in this case a complete absence of mould or mildew would be ensured.

## ELECTRICAL NATURE OF FOGS.

London fogs are particularly annoying to chemists and to photographers, whose work depends to a great extent on the light of the sun. It is almost impossible in the laboratory to note accurately the colour of solutions and tests by the air of artificial light. In his work "Familiar Letters on some Mysteries of Nature," published in 1876, Dr. Phipson shower how fogs might be dispersed by electricity, and some recent experiments by Professor Lodge appear to show that the process may be carried out on a large scale quite economically. A large Wimshurst machine with many points vigo rously worked, so as to develop abundance of frictional electricity, soon clears the air in a room full of fog. It is said that lead-smelters are likely to adopt the process for condensing the obnoxious fumes which annoy them.

## VIRGINIA BITTERNS.

Last year considerable quantities of iodinc were found b Mr. A. Baker, an American chemist, in the mother-liquors c the salt-brines of West Virginia. These brines have bee

known for a long time past to contain bromine, and have supplied large amounts of bromine to trade; but it was believed that little or no iodine was to be got from them. Now, "a series of careful analyses shows that the bitterns left from the manufacture of salt by boiling the natural brines of West Virginia and Eastern Ohio contain, besides a large amount of bromine, about one-third as much iodine as bromine. The specific gravity of the bitterns ranges from 1.28 to 1.30, and the total iodine found was from 3 to 6 per cent. of the weight of the brines. Would it not be interesting to test in like manner some of our English bitterns which have not hitherto been examined?



TRIAL OF A CHEMIST FOR CULPABLE HOMICIDE,

AT the Glasgow Circuit Court held in the Justiciary Buildings on October 28, Lord Adam on the bench, George Armitage, chemist and druggist, Greenock, was charged with culpable homicide. The libel stated that on August 22 last he did, in his shop in Hamilton Street, Greenock, being requested by George M'Lean, clerk, on behalf of his mother, the now deceased Jane Warden or M'Lean, who resided in West Burn Street, Greenock, to sell him a pennyworth of liquorice powder, culpably and recklessly sell, supply, or dispense to M'Lean, instead of the said liquorice powder, a quantity of nux vomica powder containing strychnine, a highly poisonous substance, and dangerous to life, enclosed in a piece of paper labelled "Compound liquorice powder; dose, one or two teaspoonfuls in water, as required," which, having been delivered by the said George M'Lean to the said Jane Warden or M'Lean, she partook of it, and in conse-sequence, immediately, or soon afterwards, died, and was thus culpably killed.

The accused pleaded not guilty, and was defended by

Sheriff Comrie Thomson and Mr. Paton.

George M'Lean, the first witness, stated that he was 16 years of age, and a son of the deceased. He remembered on Saturday, August 22 last, at ten o'clock at night, going to Mr. Armitage's shop for some medicine for her. He saw Mr. Armitage. James Docker, an assistant chemist, was also in the shop serving another person. He asked the prisoner for a penny liquorice powder. Mr. Armitage took down a bottle and took the powder out of it. He put it in a piece of

By the Court—The accused weighed a quantity out of the

bottle, and put the powder in the paper.

Witness, on being shown a label, read the inscription on it, which was-"Compound liquorice powder. Dose, one or two teaspoonfuls in water, as required. George Armitage, dispensing chemist." This was what he got. On going home, he put the powder on the kitchen mantelpiece, and told his mother that the powder was there. He then went to his bed in the parlour. His mother slept in the bedroom, and his two uncles in the kitchen. He wakened next morning at seven o'clock, and heard his mother crying. He went into her room and found her ill. His two uncles were there. She was in bed, and seemed to be in pain. One of his uncles went for Mrs. Dun, a neighbour, and afterwards Dr. Black was got. The doctor came in ten minutes. His mother was very ill when he came, and she died in about five minutes after the medical gentleman arrived. His mother was in the habit of taking liquorice powders in the morning. On the Saturday night when he last saw his mother she was in ordinary health.

James Docker, assistant to Mr. Armitage, stated that he had been in that capacity for nine years. It was their practice to close the shop at ten o'clock on Saturday nights. At the time this unfortunate occurrence took place there was an

apprentice named Blair with them. Blair left at twenty minutes to ten, and he (witness) left shortly afterwards. On the forenoon of the 22nd he remembered selling a liquorice powder. He did not remember selling one in the evening. The liquerice powder bottle stood near the window on the second shelf, but there was no particular place for it. The nux vomica was kept on the same shelf as the liquorice powder bottle. It might be that the two bottles were together at times, and sometimes they were separate. These medicines were often asked for. They never gave nux vomica without a prescription, but liquorice powder was often given without a prescription. The largest quantity of nux vomica they ever dispensed was five grains. There would be 120 grains in what was known as "penny liquorice powder." He made up a prescription of nux vomica on the afternoon of the 22nd, and, as far as he knew, returned the bottle to the shelf after making up the prescription. Before leaving the shop that night Blair and he dusted the counter cases, and put the bottles in their places on the shelf. He was satisfied that when he left the shop the nux vomica bottle was on the shelf. There was nobody in the shop that night at ten o'clock but Mr. Armitage.

By Sheriff Thomson—If the boy M'Lean said he was in the shop when he (witness) was in, it must have been about twenty minutes to ten at the latest. Nux vomica was in frequent use daily in making up prescriptions. They had a portion of the counter in use for the retail business and a portion for dispensing. The nux vomica bottle was never on the retail counter. The liquorice powder bottle was never on the dispensing counter. On the night in question Mr. Armitage did not seem in a hurry or in a state of excitement.

Mr. Armitage always shut the shop himself.

By Lord Adam—The colours of the two powders would be much the same in gaslight.

John and Joseph Warden, the uncles referred to, also gave

Dr. John Robert Black stated that he was called in on Sunday morning, and found Mrs. M'Lean in a state of convulsions, and seemingly on the point of death. He asked her friends when she had been taken ill. He was told that she had been taken ill after taking a dose of liquorice powder. When he asked that question she was still in life, but it was impossible for her to speak. She was passing from one convulsive fit to another, and in the interval she was bathed in perspiration. The symptoms, as he observed, pointed to nothing but strychnine poisoning. He looked at two cups at the bedside, and found in one of them a semifluid brown-looking mass. He tasted the fluid, and from the taste and colour he concluded that it was nux vomica. In the paper there was a little brown powder. He tasted that, and it was the same as was in the cup. Mrs. M'Lean died in ten minutes after he went to the house.

The Advocate-Depute-Can you state, doctor, whether it is known as a medical fact how long a person lives after

taking a fatal dose of strychnine!

Dr. Black-From half an hour till two hours. It depends on the quantity taken and the form in which it is taken. Something would also depend upon the constitution of the person. He was present when the police took possession of the cups. Along with Dr. Macdougall he made a post-mortene examination of the body. He then read the report.

The Advocate-Depute—Assuming that Mrs. M'Lean had

taken a dose of nux vomica powder in mistake for liquorice powder, would that account for the sudden nature of the

death?

Dr. Black—It would. The symptoms were consistent with strychnine poisoning. From fifteen to thirty grains of nux vomica would constitute a fatal dose. When he prescribed nux vomica it was always as an element in some other combination. He did not remember of ever prescribing nux vomica alone. He had known the prisoner all his life, and he was one of the most careful chemists that could possibly He had every confidence in Mr. Armitage as a be got. chemist. Mr. Armitage was also exceedingly diligent and attentive to his business. His opinion of Mr. Armitage was in no way shaken after what had taken place.

By Sheriff Thomson-He had known the condition of Mrs. M'Lean. It was that of a patient very advanced in consumption in the lungs and kidneys. He would say that she had not very long to live. If Mrs. M'Lean had taken a small quantity of poisonous substance she could not throw it off as a healthy woman would do. The taste of nux vomica and liquorice was quite distinct.

Dr. Macdougall, Greenock, gave corroborative evidence, and said that he had always had a very high opinion of Mr. Armitage as a dispensing chemist. Mr. Armitage was

always careful and attentive.

Dr. Littlejohn, Edinburgh, read reports of analyses which he had made of the contents of Mrs. M'Lean's stomach, the enps, and the paper which contained the powder, and which had been sent to him by the police authorities in Greenock. The result of the analyses was that strychnine was distinctly observable in all the productions. The taste of nux vomica and liquorice was entirely different. In gaslight nux vomica and liquorice closely resembled each other in colour. In Edinburgh nux vomica was little used, and was kept apart from medicinal substances. This precaution was absolutely necessary. It would be most reprehensible and dangerous to keep them together.

By Sheriff Thomson—When he stated that nux vomica was little used, he alluded entirely to the practice in Edinburgh. It was not customary to use it in Edinburgh. He had found out, however, that it was customary to use nux vomica in other parts of Scotland, and he would not be surprised to find in a town apart from Edinburgh that a dispensing chemist should have it within easy reach, but in Edinburgh nux vomica was frequently asked for as an element in making up prescriptions by first-class practitioners. He was bound to say that in gaslight nux vomica and liquoriee would look very much like each other. The nux vomica which had been sent to him as coming from Mr. Armitage's shop was lighter in colour than that which he had seen in Edinburgh, and, consequently, when seen in gaslight, the resemblance between it and liquoriee would be increased. From the doctor's report it appeared that Mrs. M'Lean was in a dying state.

Mr. King, city analyst, Edinburgh, gave corroborative evi-

dence.

The prisoner's declaration, which was then read, stated that he had no recollection of selling a liquorice powder to anyone on the night in question. Nothing of this kind had ever happened in his shop before, and he had been greatly distressed at what had taken place.

Dr. Johnston Marshall, Greenock, stated that he had never known Mr. Armitage to make a mistake in making up a pre-

scription.

Dr. Whitefield, Greenock, and Mr. Greig, manager of the Glasgow New Apothecaries' Company, also spoke of the ability which Mr. Armitage had always shown and of the close

attention which he had given to business.

Provost Wilson, of Greenock, said he had known Mr. Armitage for a number of years, and he had borne an unblemished reputation. There was general sympathy in Greenock at what had occurred, and he believed Mr. Armitage's reputation had not suffered in the community.

This was all the evidence.

The Advocate-Depute, in addressing the jury, said that no one could have more sympathy for Mr. Armitage than himself, but it was absolutely necessary for the safety of the public that cases like this should be tried. It was necessary that poisons should be kept separate from ordinary medicines, because Mr. Armitage himself in his declaration stated that since this sad event occurred he had re-arranged his shop and placed the poisons in a separate place. But to assume that it was a common practice in the West of Scotland not to keep poisons apart from medicinal substances, it showed that greater care should have been taken in dispensing them. Besides, the smell should have easily distinguished the powders. In conclusion, he stated that there had been an amount of carelessness of recklessness which entitled the jury to return a verdict of eulpable homicide.

Sheriff Thomson, in a lengthy speech, asked for a verdict of acquittal, as he thought that the object of this trial had been entirely served by the warning which it would give to other ehemists. In conclusion, he said that the high character, the long experience, and the reputation for constant carefulness in business which the prisoner had, stood him in good stead for the mistake made herc. He therefore asked the jury, as a matter of right, to restore Mr. Armitage to his family and to the position of honour and usefulness which he had for so many years distinguished. (Applause in court, which was immediately suppressed).

Lord Adam, in addressing the jury, stated that the question for them to consider was whether or not the prisoner was criminally liable for the consequences of his act in so giving nux vomica to the young man instead of liquorice powder, as was asked. If it was an excusable mistake there was no crime, if it was culpable negligence prisoner was liable. They were to consider if the keeping of prisoner's bottles mixed up with other medicinal bottles was a dangerous practice, and if they thought so, the prisoner was responsible for the consequences.

The jury, after an absence of ten minutes, returned and unanimously found the panel not guilty, but recommended that some distinctive colour or mark be put on bottles con-

taining a deadly poison such as nux vomica.

The prisoner was therefore discharged from the bar.

## IN RE HADDEN'S TRADE-MARK, 1883, No. 3,096.

A claim by Mr. Mellin, the proprietor of Mellin's Food, for the revocation of this patent came before Mr. Justice Kay on Monday last (Nov. 9). The patent related to a food for infants, made of barley and wheat and milk, and the claimant alleged that he had manufactured exactly the same article since 1878, and had made it without milk since 1867. His lordship considered it to be conclusively proved that the patent was long ago anticipated, and thought great injury would be done to Mr. Mellin if it were allowed to remain in force. He therefore ordered the revocation of the patent, with costs.

## THE MEDICINE STAMP ACT.—EXCISE PROSECUTIONS.

At Bow Street Police-court, on November 7, Thomas Martin-dill, manufacturing herbalist, of 168 High Street, Shoreditch, appeared to three summonses, charging him with exposing for sale certain boxes of cough lozenges and bottles of horehound and Iongwort balsam to be used as medicines, such bottles and boxes having affixed to them labels on which the preparations were held out and recommended to the public as proprietary medicines and specifies, the same not being duly stamped. The defendant pleaded guilty, and a solicitor who appeared for him explained that the lozenges were not usually put up in boxes and labelled until they had been purchased, but the shop had been left in the care of a manageress, who did not know the law on the subject. Mr. J. Squire, who appeared for the prosecution, read part of the Act of Parliament. Sir James Ingham imposed a fine of 20s. on each of the three cases, and 10s. costs in each, a total

penalty of 4l. 10s.

John Morgan Davis, chemist, 89 Bishopsgate Street, and of Charles Street, Farringdon Road, next appeared to answer four summonses for selling compounds of sarsaparilla and seaweed, solution of quinine and "Digestive Tonie Candy," also without the Excise label. The purchases having been proved by William Frost Spears, Excise officer, the defendant, who appeared for himself, claimed that there was nothing in his own labels attached to the medicines claiming any secret or art. Anybody could make the same preparations. Why did the Excise authorities not attack the rich men who made fortunes out of sanitary soaps, &c.? Sir James Ingham said he would deal with the cases of those gentlemen when they came before him. It was possible that they might have incurred penalties of many thousands of pounds. At present he had only to deal with the defendant's ease. After some further evidence by officers of the Excise, Sir James Ingham said he came to the conclusion that the announcements placed in the defendant's shop windows recommending the medicines as being good for indigestion, &c., brought him within the provisions of the Act. The defendant said that in that case the duty would have to be paid on nearly everything he sold in his shop. Sir James Ingham said he had no doubt it would. He also had no doubt that in passing these Acts the Legislature had the intention of casting as wide a net as possible. The defendant said if he were a rich man like Mr. Lamplough, and could carry the case from court to court, he might, like Mr. Lamplough, win, and not be forced to put a threepenny stamp on his preparations. This was a case of persecution, and if carried on to the full extent it would be utterly impossible to carry on a chemist's business, already nearly ruined by the competition of co-operative stores and

other things, at all. He contended that his medicines were merely pharmaceutical preparations, which any chemist might make. Why should a chemist not be allowed to praise his wares? Pears' soap was advertised as doing all sorts of things, such as making the skin smooth, an ugly woman beautiful, and——. Sir James, interrupting: Turning a black boy white. But what I have to do here is to earry out an Act of l'arliament, and I cannot see any escape in your case. Sir James then fined the defendant 20s. in each of the first three cases, 1s. in the last, and 10s. costs.



- The following list has been compiled expressly for The Chemist and Druggist by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]
- Abdominal Belt.—11,665.—September 30, 1885.—11. Fisher, Λ. B. Soar, and H. Potter. Λ light ventilating abdominal belt.
- Aërated Drink.—12,441.—October 19, 1885.—C. R. C. Tiehborne and A. W. Ore. A new or improved aërated drink.
- Aërated Liquids.—No. 11,681.—October 1, 1885.—H. Cochrane. Improved aërated liquids.
- Aërated-water Apparatus.—11,567.—September 29, 1885.

  —J. T. Leighton. Improvements in apparatus for the manufacture of aërated waters and other similar beverages.
- Bottle-opener. 11,867. October 6, 1885. II. Youlc. An improved apparatus for opening bottles containing mineral waters.
- Bottle-rinsers. 12,569. October 20, 1885.—R. White. Improvements in bottle-rinsers.
- Bottle-stopping.—11,604.—September 29, 1885.—O. Imray. A communication from W. Painter and L. R. Keizer, United States. A method of stoppering bottles and other vessels. — 11,638. — September 30, 1885.—W. Stott. Improvements in or applicable to closing or stoppering bottles to dispense with loose corks or stoppers.—11,924.—October 7, 1885.—II. Breeknell. Improvements in external screw-stoppered bottles, jars, and similar vessels.—11,946.—October 7, 1885.—E. Edwards.—A communication from A. Signoret, France. Improvements in apparatus for closing the mouths of bottles or other hollow articles. -- -11,983. -- October 8, 1885. C. S. Marriott. An improved apparatus for stoppering and unstoppering bottles.—12,029.—October 9, 1885.—E. E. Hanslow. Improvements in plug stoppers for stoppering bottles.—12,089.—October 10, 1885.—
  T. Matthews. Improvements in stoppering bottles or jars.—12,207.—October 13, 1885.—W. Bartholomew. Improvements in the manufacture of serew-stoppers for bottles and jars.—12,256.—October 14, 1885.—A. Mackay, M. Mackay, and R. E. Goolden. Improvements in the manufacture of serew stoppers.—12,273.—October 15, 1885.—J. S. Rodgers. Improvements in appliances for stoppering bottles.—12,340.—October 16, 1885.-F. Fidler. Improvements in stoppers with automatically elosing aperture for perfume and other bottles.—12,361. October 16, 1885.—R. G. Sanders. —Improvements in the stoppering of bottles or other vessels.—12,412.—October 17, 1885.—11. Brecknell. \_12,709.— Improvements in stoppering bottles or jars.— October, 23, 1885.—W. Hazelhurst and J. Lyon. improved bottle-stopper. — 12,819.—October 26, 1885. -W. Lowrie. Improvements in screw stoppers for bottles and similar vessels.—12,889.—October 27, 1885. —J. W. A. Germany and R. P. Doo. A bottle-stopper applicable for wincs, spirits, beers, and aërated waters,

- Ammonium Chloride and Potassium Sulphate.—12,745.
  —October 23, 1885.—W. R. Lake.—A communication from T. Schmidtborn and D. Jarves, United States. An improved process for the manufacture of ammonium chloride and potassium sulphate.
- Apparatus for Feeding Corks.—12,796.—October 24, 1885.

  —F. Foster and J. H. Hamilton. Improvements in apparatus for feeding corks to machines for filling and corking or for earking bottles.
- Bottles.—12,327.—October 16, 1885.—J. Humphreys. Improvements in bottles and in the method of and means for closing the same.——12,377.—October 16, 1885.—H. Codd. Improvements in bottles and jars.——12,818.—October 26, 1885.—W. Lowrie. Improvements in bottles for sediment liquids.——12,827.—October 26, 1885.—J. Heinicke. Improvements in bottles or pots for liquids.
- Bottle-washing Apparatus.—11,662.—September 30, 1885.
  —L. Percheron.—A communication from I. Rouhier,
  Mauritius. Improved apparatus for washing bottles.
- Chloride of Ammonium Vapour.—11,674.—October 1, 1885.—C. Symes. The medicinal application of chloride of ammonium vapour.
- Cough Mixture.—12,092.—October 12, 1885.—T. Needham.
  A new or improved cough mixture.
- Dephosphorisation of Iron Ore.—12,265.—October 14, 1885.—A. Fehlen. Improvements relating to the dephosphorisation of iron ore and to the production of phosphate of soda and phosphate of ammonia.
- Disinfectant.—11,988.—October 8, 1885.—J. L. Sabunjie. Disinfecting and deodorising purposes, consisting of the combination of soap with permanganate of potash.—12,060.—October 10, 1885.—E. Foster and W. H. Bebby. An improved disinfecting, deodorising, and fumigating powder.—12,238.—October 14, 1885.—A. Boake and F. G. A. Roberts. Improvements in disinfectants.—12,261.—October 14, 1885.—J. Hanson. Process and means for disinfecting, deodorising, and purifying sewage and other foul waters or matters.
- Disposal of Sewage.—12,674.—October 22, 1885.—II. W. Crellin. Improvements in the treatment and disposal of sewage.
- Distilling, &c., Liquids.—12,892.—October 27, 1885.—J. C. Mewburn. Improvements in distilling and concentrating liquids, and apparatus therefor.
- Explosive Compound.—12,837.—October 26, 1885.—II.

  Imray.—A communication from H. Dulitz, Germany.

  Manufacture of an explosive compound.
- Feeding-bottles—11,787.—October 3, 1885.—J. G. Ingram. Improvements in infants' feeding-bottles.
- Fertilising Compounds—12,231.—October 14, 1885.—J. Davies. Improvements in, and in the manufacture of, fertilising compounds.
- Filtering Materials.—12,734.—A. G. Salamon. Improvements in the manufacture of filtering materials.
- Filters.—11,996.—October 9, 1885.—E. M. Knight. Improvements in filters and in the arrangement and combination of ingredients or filtering medium employed therein.——12,364.—October 16, 1885.—T. Swan. Improvements in filters.——12,871.—October 27, 1885.—W. R. Lake.—A communication from F. O. Matthiessen, United States. Improvements in, and relating to, bone-black filters.
- Fixing Ammonia.—11,609.—September 29, 1885.—R. Nicholls. Improvements in the mode of fixing ammonia and other gases for manurial and other purposes, and in apparatus employed therefor.
- Lead Salts.—12,891.—October 27, 1885.—A. W. Anderson. Improvements in apparatus for facilitating the dissolution of oxide of lead and other substances for making lead salts for the manufacture of white-lead and other compounds of lead.
- Liquid Soap.—12,305.—October 15, 1885.—R. Livesay.—A eommunication from Dr. Durean, Russia. Improvements in liquid soap.

- Mineral Waters.—12,126.—October 12, 1885.—W. L. Scott. Improvements in the manufacture of mineral waters and aërated or effervescent beverages.
- Obtaining Granulated Antiseptic Preparations.—12,985. October 28, 1885.-W. D. Borland. Obtaining granulated antiseptic preparations.
- Producing Alcohol.—11,970.—October 8, 1885.—W. P. Thompson.—A communication from C. Oxdonneau, France. Improvements in the production of alcohol.
- Seent-bottles, &c.—12,245.—October 14, 1885.—T. Baker. Improvements in bottles to be used for containing scents and for other similar purposes.
- Soap. -12,822. October 26, 1885. J. Thomson. Obstetrie
- Soap-cutter. -11,744. October 2, 1885. T. McGuffie. Improvements in apparatus for cutting bars of soap into
- Spirits.—12,036.—October 9, 1885.—G. G. Picking and W. Hopkins and J. Dore. Improvements in the manufacture of spirits.
- Substitute for Turpentine.-12,249. October 14, 1885.-S. Banner. A new or improved substitute for turpentine.
- Suction-fastener. 12,591. October 21, 1885. T. Marston. Suction-fastener for artificial teeth.
- Tooth-brush. 12,489.—October 19, 1885.— F. W. Thornberg. An improved revolving tooth-brush.
- Treating Antimonial Ores. 12,723.—October 23, 1885.-T. C. Huntington and M. Chiapponi. An improved method of treating antimonial ores or compounds for the production of pigment.
- Treating Phosphatic Slags. 12,141.—October 12, 1885.-H. Brunner. Improvements in, or relating to, the treatment of phosphatic slags for the recovery of valuable materials therefrom.
- Treating Vegetable Substances.—11,550. September 29, 1885.—J. Napier and T. G. Young. Improvements in apparatus and methods for treating with ehemical agents vegetable substances capable of yielding pulp for papermaking or other useful applications.
- Trusses.—12,022.—October 9, 1885.—Salmon, Ody & Co. double truss for the relief of hernia.—12,411.—October 17, 1885. E. de Tomanzie and M. E. de Tomanzie. Improvements in the construction of trusses for hernia.—12,464.—October 19, 1885.—A. Hodge. Improvements in trusses for hernia.
- Utilisation of Alkali-waste. -11,747. -October 2, 1885. R. Fullarton. Improvements in the utilisation of alkali-
- Utilisation of Waste Liquors. 12.344.—October 16, 1885. -J. Webster. A process for the utilisation of waste liquors or tank-waste containing calcium chloride.

Specifications published during the month:-Postage 1d. each extra.

## 1884.

- 13,629. H. W. Fenner. Distillation of eoal-tar, &c. 6d.
- 14,173. J. W. Pratt. Purifying and decolourising crude nitric aeid, &c. 4d.
- 14,280. F. A. Bird and J. B. Fenby. Stoppering bottles. 6d. 14,549. P. M. Justice. Manufacture of alkaline phosphates.
- 14,866. F. Bolton. Manufacture of caustic soda and potash,
- &e. 4d.
- 14,914. W. Hope. Gunpowder for ballistic purposes. 4d.
- 15,020. S. Jennens. Dentifrice, 2d. 15,393. S. Callard. Treatment of sulphate of iron, 2d.
- 15,659. J. W. Kynaston. Manufacture of sulphite of ealeium. 4d.
- 15,810. J. W. Slater and W. Stevens. Agent for the treat-
- ment of sewage, &c. 4d.

  16,592. J. W. Slater and W. Stevens. Purification of sewage by precipitation. 2d.

#### 1885.

- 900. F. W. Lyte. Purifying and deodorising sewage, &c. 40.
- 2,465. J. Girdwood. Remedy for asthma, &c. 4d. 3,448. J. J. Varley. Valve-stoppers, &c. 6d. 8,249. J. Banks. Catheters. 6d.

- 8,440. E. W. Parnell and J. Simpson. Obtaining sulphuretted hydrogen from sulphide of ammonium. 4d.
- 8,541. H. Leplay. Decarbonating the carbonates of strontia and baryta, &c. 6d.
- 9,424. R. B. Breidenbach. Expanding elip for the necks of bottles. 4d.
- 10,047. E. L. Lloyd and C. C. Joly. Bottle-stoppers. 4d. 10,226. T. Durrans. Stoppering bottles. 4d.

## Personalities.

MR. S. COUNT has succeeded to the business lately earried on by Mr. Betts, at 17 High Street, King's Lynn.

Mr. Williams, from Corbyn & Co., London, has purchased the business of the late Mr. Jones, Noble Street, Plymouth.

MR. JOHN J. SHIPMAN has opened a new business at 63 Commercial Road, Bournemouth.

Mr. Benjamin Robinson, pharmaceutical chemist, the well-known manufacturer of concentrated waters, &c., has been elected a member of the Salford Town Council.

MR. J. HARVEY BAILEY (formerly with Messrs. Corbyn & Co.) has succeeded to the ehemist's business recently earried on at 77 Old Town Street, Plymouth, by Mr. Squire.

MR. GEORGE BREEZE, Devonport, has purchased the business of Mr. G. M. Trevaskis, Union Street, Plymouth, which he intends to earry on as a branch establishment.

MR. SEARLE, chemist, Fakenham, has relinquished his business owing to ill-health, and is succeeded by Mr. R. A. Metealf.

Mr. J. A. Spargo has repurchased the business at 1 Pier Terrace, Lowestoft, of which he was the former proprietor, from Messrs. Mason & Nuthall.

MR. T. BLACKMAN, Stow-on-the-Wold, has sold his business through Mr. Brett, of Leieester, to Mr. B. W. Price, of Wigan.

MR. GEORGE STRAWSON, ehemist, of Bishop Castle, Salop, has been returned as one of the councillors of the borough at the first election under the new charter, recently granted.

"PROFESSOR" EGLEN, mentioned by our Sheffield correspondent as having suddenly left Sheffield, has, we understand, opened premises in Manchester. He promises a distribution of blankets and loaves to the poor during the winter.

MR. F. DAVIS, of Compstall, near Stockport, has sold his business to Mr. Hornby, of Stockport, and has bought Mr. T. W. Clarke's business at Ewias Harold, Pontrilas, Herefordshire.

CHEMISTS have hardly won their fair proportion of mayoralties this year. All that we can trace are Mr. Hough, re-elected for Doneaster, Mr. E. Hellier, for Yeovil, and Mr. Henry Henley, for Lyme Regis, while Mr. James Beach is newly elected for Bridport. Mr. Henley and Mr. Hilliar figure as Conservatives, while the other gentlemen are reported to be Liberals.

PRESENTATION.—On October 20, a special meeting of the Rye District Commercial Association was held at the Assembly Rooms of the George Hotel, Rye, for the purpose of presenting the President, Mr. A. Smith, with a testimonial in the form of a handsome chime clock, as a token of the esteem in which he is held by the members, and as a slight aeknowledgment of his long and useful services to the Association. The presentation was made by Mr. C. Fletcher, Jun., in a neat and appropriate speech, and the recipient replied in suitable terms. A concert with recitations formed part of the programme.

## Trade Report.

FOR October the Board of Trade returns show the following results:—

## Imports.

Total value .. .. £31,097,134 .. £29,757,327

## Exports.

Oct., 1884 Oct., 1885

British and Irish produce . £20,414,162 £18,674,498

Foreign and colonial produce
(partly estimated) . 4,758,654 5,467,923

And below are the details affecting drugs and chemicals:

## Imports.

_			Out 1923	Oct., 1884	Oct 1005
			176 1., 1005	000, 1004	000., 1000
part li					
Outskallers		11	10 770	100 400	164.000
Qulcksilver		lbs.	16,332	100,490	154,268
Alkali		value £	1,149	7.506	11,382
		cwt.	5.992	5,187	6,187
Chemicals (nuennme		value £	7,395	5,722	5.044
Dycs (coai-tar)—	rated)	* * 99	137,436	125,136	108,779
4 117			,	( 29.411	22.374
A 11 mm ml m m		* * 11	34,315	15,201	
Other coal-tar dyes		* * 17	34,313	90	55.807
Oil-		* * 11	1	( 50	330
O-manush		ewt.	35,763	27.272	8,680
		vaiue £	65.002	42.667	12.094
Olive		tuns	2.334	1.806	1,418
		vaiue £	87,558	73 020	57.049
I'alm		cwt.	72,942	79,979	86.991
11		value £	131.372	128,140	112.291
Petroleum		gals.	6.394.174	6.776.171	8.230,606
		value £	190.900	201,590	245.877
Seed, of all kinds		tuns	1.025	1.496	1.699
		value £	36.336	38,936	43,494
Train. blubber, and s	perm	tuns	2.581	2.025	1.971
	12	value £	78,591	55,983	46,700
Turpentine		ewt.	41.397	49,798	29.604
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		value £	63,155	59,945	36 930
Bark, Peruviau		cwt.	6.808	8 591	12.523
21 11 00		vaiue £	76.520	69,751	74.251
Gum — "			. 0,020	00,101	1,001
Arabic		cwt.	5.105	7.571	7.893
21		value £	11.778	22.122	29,466
Drugs, unennmerated			126,433	50.738	75.015
		***		20,100	. 0,010

## Exports.

	Oct., 1883	Oct., 1884	Oct., 1885
Alkali	680,118 219,464 152,700 58,320 76,928 4,258 27,634 35,205 5,905 14,906 318,998 23,156	658,979 193,942 171,542 67,462 86 234 10,844 64,268 11,631 3,263 11,183 230,317 16,843	590 544 179,582 107,012 36,411 80,988 13,492 91,939 19,397 4,497 15,189 173,769 13,611

## MINCING LANE, November 12.

Good business has continued to take place in many articles during the past mouth, although we are bound to admit that within the last few days a quieter tone has set in, probably in consequence of the near approach of the elections, which are now beginning to absorb considerable attention.

Again a serious decrease is shown by the Board of Trade returns in both imports and exports. With regard to the latter, there is a marked falling-off in shipments to Turkey and the East, which is probably attributable to the renewed "Eastern question" anxieties, brought about by the present state of affairs in Eastern Roumelia.

Bank rate has been raised to-day to 3 per cent.

The drug sales to-day were very extensive, the catalogues being unusually lengthy, even for the end of the year, when they are generally more comprehensive than at other periods in order to clear accounts; notwithstanding which a very quiet tone characterised the whole, which were got through before four o'clock.

ACIDS have remained without animation, and *Citric*, notwithstanding the higher rate asked for juice, is quiet at 1s.  $7\frac{1}{4}d$ . per lb. *Tartaric* continues also quiet, at 1s.  $6\frac{3}{4}d$ . per lb. foreign, 1s.  $7\frac{1}{4}d$ . English make.

Aloes.—Cape remain in fair supply at unchanged prices. Very considerable quantities of Curaçoa continue to be offered, so that easier rates for this description may be confidently expected.

AMMONIA.—Grey 24 per cent. meets with steady business at 11*l*. per ton.

ANTIMONY.—In consequence of increased quantities on the market being pressed for sale, both Crude and Regulus have become weaker. Crude, 191. to 201.; Regulus, 341. per ton,

ARSENIC. - Powdered white continues steady at 11s. per ewt.

Balsams are in poor demand, generally at unchanged rates.

BARK.—The extensive business, to which we last month referred, continued with a steady improvement, until the quinine unit value reached about 8d.; but the last public sales, held the 3rd inst., showed signs of weakness, and only part of the quantity of East India qualities offered succeeded in finding buyers at easier rates, indicating a quinine unit value of 7d, to  $7\frac{1}{2}d$ . Under these circumstances it is probable that lower prices will be accepted in the next sales, which are to take place the 17th inst., when a very large quantity will be offered, as lets advertised up to the present time total 5,232 packages. The exact quantity of Ceylon bark shipped during the season, from October 1, 1884, to 1885, was 11,678,360 lbs., surpassing that of previous season by 185,413 lbs. Shipments from Java, although on a smaller scale, show a much more important increase, and are, moreover, considerably richer in quinine, and before long the cultivated Bolivian production is also expected to arrive upon the London market. Stock of bark in London on October 31 was 62,466 packages, against 89,200 packages at same time last year, although, having regard to the discrepancies in the size of the package of East India bark and its liability to increase of late, an exact comparison is not to be arrived at by these means.

BLEACHING-POWDER has further given way in price to 71.5s. per ton ex warehouse, and is quiet thereat.

BORAX at reduced rates of 32s. 6d. to 35s. per cwt. meets with steady demand.

CALUMBA-ROOT.—Ordinary and low qualities continue in plentiful supply, but good root is very scarce.

CAMPHOR.—Prices for raw camphor remain at 79s. to 71s. per cwt. The demand for refined qualities, as is usual at this season of the year, is restricted, although makers appear disinclined to reduce rates.

CAMOMILES of good quality maintain values of 65s. to 72s. 6d. per cwt., but some very inferior old are obtainable at very low rates.

CANTHARIDES.—In consequence of smallness of stocks and lack of arrivals, price for Russian has risen rapidly, and now 10s. per lb., and even more, is asked for good flies.

Cassia Lignea continues in a depressed state at former rates.

CLOVES have met with extensive business, but are now quieter; Zanzibar  $5\frac{3}{8}d$ . to  $5\frac{5}{8}d$ . per lb.

COCA LEAVES continue to be freely offered in public sales. COCAINE is reduced to 2s. 6d. to 3s. per gramme.

COCHERAL.—Owing to a lasting and much more general demand, the prices of all qualities are about  $1\frac{1}{2}d$ . per lb. dearer.

CODEINA continues in good demand at late advanced rates.

COD-LIVER OIL much firmer, with advancing tendency.

CREAM OF TARTAR is easier, at 126s. 6d. to 127s. per cwt.

CUBEBS are firmly held, and good genuine berries are worth 16l. to 17l. per cwt., while those of doubtful character are not pressed for sale.

ERGOT OF RYE is considerably advanced in price, and good qualities are difficult to secure.

Essences.—Bergamotte is dearer, at 6s. per lb. for good quality. Lemon is also in a better position; the cheap lots of inferior quality lately offered here are disappearing, and higher rates continue to be demanded for new crop essence to arrive.

GINGER is firmer for all qualities.

GUM ARABIC continues to command full rates for all descriptions, but the large quantities which are now coming forward for public sale lead us to doubt whether the extreme prices will be long maintained.

GLYCERINE is still firmly held, but the mildness of the present season checks the demand.

HONEY of all descriptions is being offered in public sales, sometimes without reserve.

IPECACUANHA is unchanged in value, but fine bold root is difficult to obtain.

ISINGLASS.—The improvement we noticed in our last month's report was fully sustained through the public auctions, held the 3rd inst., when the supply of East India sorts was unusually small; only 193 packages offered, of which 133 found buyers. Saigon made about previous prices, but Penang was in strong demand at 1s. per lb. advance for good tongue, and nearly all other sorts showed an improvement of from 1d. to 4d. per lb., as per following details:—Penang.—82 packages offered, 77 sold: Tongue, small pale middling, 3s. 7d. to 3s. 10d.; fair to ordinary, 1s. 10d. to 2s. 1d. per lb. Purse, good pale, 2s. 4d.; dark middling, 1s. 10d. to 1s. 11d.; low pickings, 9d. per lb. Leaf, middling to fair pale, 3s. to 3s. 6d.; ordinary to good pickings, 1s. 11d. to 2s. 8d. per lb. Scrappy sorts, 1s. 3d. to 1s. 9d.; dark rejections, 10½d. per lb. Scrappy sorts, 1s. 3d. to 1s. 9d.; dark rejection, 11d. per lb. Purse, dark ordinary, 1s. 1d. to 1s. 2d. per lb. Pouches, 6d. per lb. Tongue, good ordinary to pale middling, 1s. 11d. to 2s. 7d. per lb. Bombay.—55 packages offered, 27 sold: Purse, good to fine, 1s. 11d.; ordinary bold, 10d. per lb. Pipe, fatty yellow, 1s. 8d. to 1s. 11d. per lb. Pale Kurrachee leaf, 1s. 11d. per lb. Next sales 24th inst.

LEMON-JUICE has ruled at higher rates, and 23l. per pipe, f.o.b. Messina, is reported to have been paid for a large line for prompt shipment, although 22l. is accepted for forward delivery.

LIME-JUICE.—The present low rates are attracting steady trade, and price is firm at 1s. 8d. per gallon.

MENTHOL is in moderate demand, the various makes being quoted about 26s. to 30s. per lb.; Cocking's, 28s. per lb.

OILS.—Anisced is advanced in price, and now 6s. 10d. to 7s. per lb. is asked. Peppermint.—II. G. Hotchkiss' has increased in value to 18s. per lb., advices from America reporting a short yield as the result of the last crop, and a considerable rise there in all qualities in consequence. Cocking's Japan oil is also quoted dearer, at 14s. 6d. per lb.

OPIUM.—The improvement as reported by us last month has continued, and values have risen up to 14s. 9d. per lb. for best shipping qualities, and the position of the article is now altogether a firmer one.

OTTO OF Roses is still in good demand, and the fact of the shippers of one well-known brand having suddenly raised their price 33 per cent. strengthened the position considerably. Other shippers have not yet followed the example to anything like that extent, and some whose stocks were brought up early out of the disturbed districts prefer to continue cautiously selling at unchanged rates, under certain reserves as to time of delivery, in order to avoid disappointment. Those who are in a position to continue to their friends the

full advantages with which the season opened are full of business.

Petroleum Oil has slightly improved to following values:—Spot, 7d. to  $7\frac{1}{4}d$ .; December, 7d.; January-March, 6 13-16d. per gallon.

Petroleum Spirit.—Common, 7d.; refined,  $7\frac{1}{4}d$ . to  $7\frac{1}{2}d$ . per gallon.

PIMENTO.—Business, after large transactions, has now become more restricted.

POTASH.—Chlorate remains worth 8d. per lb. for prompt delivery, although the tone of the market is not quite so strong as it was.

POTASSIUM.—Iodide is in moderate demand, fat prices ranging from 10s. 9d. to 11s. 6d. per lb., according to make.

QUICKSILVER.—Importers have reduced their price to 51. 16s. 3d. per bottle, at which there is small business.

QUININE continued to improve in value, Howard's price advancing to 3s. 10d. and then to 4s. for 1-oz. bottles, at which it stands to-day, Whiffen's and foreign makes increasing in value accordingly; but during the last few days a changed tone has pervaded the market, and the present position is a quiet one. During the recent large business we believe that a fair quantity of second-hand quinine was disposed of, but we also believe that a considerable quantity still remains, and is the cause of the present relaxation in values. If the price of bark cannot on account of these intermediate obstacles be reflected in a fair value to the quinine-maker, it stands to reason that a reaction must ensuc, and the price of bark yield to the manufacturer, especially so long as the raw material comes forward plentifully, not only on this market, but also in Holland, where English buyers are at liberty to seek their requirements if London prices are too encroaching. The American demand appears to have subsided, and it is reported that the large quantity of 125,000 oz. sulphate of cinchonidine of European make for forward delivery was also lately secured by American buyers,

SAFFRON has experienced an extraordinary rise in consequence of various unsatisfactory reports concerning the new erop coming upon a market almost denuded of stocks. As we have before mentioned, the cholera has interfered considerably with Spanish shipments for a long time, and nothing like the usual quantity has reached the London market this season. We are inclined to think the bad reports of this year's erop are rather exaggerated, however, and that the extreme rates now asked, which are about 40 per cent, higher than last month, will have to yield somewhat so soon as the unhappy disease gives place to a revival of business and business habits in the growing and shipping districts.

SALTPETRE.—English refined, quiet, at 21s. 6d.; kegs, 22s. 6d. per cwt.

SENNA.—Tinnevelly new crop leaves are making very high prices, as it is reported that this year's shipments will be considerably less than usual.

SODA.—Crystals are again lower, at 2l. 13s. per ton here, ex ship, and 2l. 6s. 6d. Tyne, with only small business. Bicarbonate continues dull, at 7l. 15s. per ton, ex warehouse, here.

Soy.—China, on account of large arrivals, is cheaper, at 1s. 5d. per gallon.

SULPHATE OF COPPER is still further reduced in price to 14*l*. 15*s*. to 15*l*. per ton, and at these remarkably low figures business is but small.

TURPENTINE.—The improvement steadily continues, and prices of American spirit are now: Spot, 27s. to 27s. 3d.; December, 27s. 3d.; January-April, 28s. to 28s. 3d. per cwt.

## (FROM OUR AMERICAN CORRESPONDENT.)

NEW YORK, November 2.

During October business has been better than was anticipated, and was considerably in excess of the corresponding period of last year. As to prices, the market for nearly all descriptions of goods shows a firm feeling; in-

deed, all indications point to a steady, and, it is to be hoped, permanent improvement in the drug market. For export the inquiry has also been brisk. The prices in parenthesis in sterling are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

ALOES CURACOA.—200 boxes came to hand; the market is greatly depressed; ordinary dark livery can be bought at 6c. (31s. cwt.)

BALSAMS.—Copaiba: the arrivals still continue heavy, amounting to 7 tons of all kinds, and the market is decidedly weaker. Para is quoted 32e.  $(1s. 5\frac{1}{2}d)$ , Maranham 33e. (1s. 6d), Maracaibo 30e.  $(1s. 4\frac{1}{2}d)$ ; the demand for export is small, being only 1,500 lbs. during the month. Tolu is quite neglected, and stocks were increased by 10 cases; price on the market is nominally 34e.  $(1s. 6\frac{1}{2}d)$ , while the bulk of the stock cost the holders considerably more. Canada is unchanged. Peru now comes from London.

CASCARA SAGRADA BARK.—The demand from all parts of Europe has been greatly increased lately; prices, however, are easier. Prime thin bark is quoted 12c.  $(6\frac{1}{2}d.)$ , while the thick flat Oregon variety can be had for 8c.  $(4\frac{1}{2}d.)$ .

Tonca Beans.—The holders of the very large stocks of Angostura are firm in their demands, some asking \$2 (8s. 6d.), but good quality can be had for \$1.60 (6s. 10d.) Paras are also in large supply here, but are held at high rates.

CAMPHOR.—For refined, in 4-oz. blocks, contracts are being made for delivery early part of next year, and, owing to the small stock of crude, the manufacturers are very firm in their quotations—lowest 20c.  $(10\frac{3}{3}d.)$ .

CUBEBS, -284 bags arrived here from London.

GUARANA.—5 cases arrived, but were not offered on the market. Price nominally \$1.90 (8s. 3d.).

Californian Honey.—A shipment of 500 cases arrived, viâ Cape Horn. The quality is genuine, candied, but rather mixed in colour. Price, 64c. (32s. per cwt.) in cases.

COCA LEAVES.—In all, 10,000 lbs. arrived, and have been taken by the cocaine makers, the light Bolivian leaves at 45c. to 50c. (2s. to 2s. 3d.), and for some of the dark green Peruvian as high as 60c. has been paid (2s. 8d.).

ESSENTIAL OILS.—Wintergreen still tends higher. The distillers state it does not pay them under S2 per lb., and as for a considerable time it has been selling under this price, and supplies are falling off, it has got searce. To-day the price in export tins is S2 (8s. 6d.). Sussafras has been in very large demand, and will probably again advance. Price, 45c. (1s.  $11\frac{1}{5}d$ .).

BROMINE.—Large shipments are making from Baltimore—50,000 lbs. to Havre and 200 cases to London, the prices reported to be 33c. (1s. 4½/d.), but whether f.o.b. or delivered did not transpire. The salts are unaltered.

ROOTS.—Golden Scal is very cheap, now 14c. (7\daggerard). Jalap is not in much request; 54 bales have arrived, rather a mixed lot, but mostly prime. Price 11c. (6\daggerard). Pink is scarce and higher, 30c. (1s. 4\daggerard). Sarsaparilla.—The large quantity of 500 bales of Mexican came to hand, but has all been taken from first hands. Good Vera Cruz is quoted 11c. (6\daggerard).; Tuspan, 10\daggerard. (6d.). Honduras.—The stock is 550 bales, showing a decline of 170 bales during the month, this being mostly shipped to Germany. The price, however, is lower all round. The first can be had for 36c. (1s. 10d.); good bright, 33c. (1s. 8\daggerard).); low-class brands, 30c. (1s. 7d.). Senega is dearer. Really prime bright Western root cannot be had under 48c. to 50c. (2s. 3d. to 2s. 4d.); dark and chumpy can be had from 46c. (2s. 2d.).

Annatto in Paste.—It may interest your readers to know that 65 baskets arrived here from Para, quality fair, and brought the high price of 38c. (1s. 9d.).

SPERMACETI.—The demand is still much larger than the production, and now the makers report that the whole of their output for this month is contracted for, and want offers for their December make, it will probably be higher. Last price paid, 34c. (1s. 5\frac{1}{4}d.). Exported during October, 10 tons.

BEESWAX is in large demand for export; the price ranges from 26½c. to 28c. (6l. 7s. 6d. to 6l. 15s.) according to quality.

OIL PEPPERMINT.—The crop this year which gave such promise of being above the average of the last few years, has again disappointed the growers, distillers, and dealers, by not yielding nearly as much oil as was expected. A month ago the farmers were selling their crude oil at \$2.80, (11s.6d.), but a week since they were getting \$3.40, (14s. 2d.), and those that have any left now demand \$4, (16s. 6d.). This most extraordinary state of affairs has been brought about, first of all, by the damage to the crop, and the yield turning out to be 20,000 lbs. less than estimated; then, by the course adopted by parties who wished to depress the market, so that they could buy up the crop cheaply. Both of these disturbing elements were, so to say, discovered by the growers and outside dealers simultaneously, and hence a rush of buyers. The farmers kept advancing their prices, but so did the dealers, and more than two-thirds of the crop is out of producers' hands. Very high rates may be expected to rule next year. As to the parties who sold forward, it is generally reported that they have been "caught short." The market here is unsettled, bulk oil being nominally \$3.75 (15s. 9d. net), while H. G. Hotchkiss is quoted \$4 (18s.), but no quantity of either can be had even at these high figures.

QUININE.—During the month the price advanced from 68c. (3s.), for bulk, to 88c. (3s. 10d.), the price at which it stands to-day. There can be little doubt the advance has been brought about by the action of the American manufacturers; one large firm here has secured enormous quantities of bark, in London and elsewhere, it is thought with the object of eventually driving the price higher: this move, however, may have another object, and prices here, at any rate, may be put lower if the European makers quote much below the home makers. The demand is much larger than when the price was at its lowest, even although this is the season when there is least consumption.

The following were the Stocks in the Port of London on October 31 last, with those for the corresponding date of the previous year:—

	1885	1884		1885	1884
Aloescs	4,382	3,642	Gum (cont )—		
"kegs	24	21	Benjaminpkgs	1,575	1,666
"gourds	152	49	Damar ,,	3,835	3,835
Aniseed, Star ehts	285	226	Galbanum ,,	15	19
Arrowrooteks	13,018	11,477	Gamboge ,,	151	149
, bxs & tins	3,584	5,338	Guaiaeum "	36	127
Balsameks, &c.	497	528	Kino ,,	161	160 658
Bark, Medicinal			Kowrietns	1,729	254
cks & cs	2,762	4,445	Mastiepkgs	235	140
" srns, &c.	59,704	84,755	Myrrh, E.I. ,,	5,427	6,264
Boraxpkgs	734	623	Olibanum ,, Sandarach ,,	1,324	1,036
Bees' waxbls &	000	DOE	FF2 4.7.	1,219	1,419
srns	900	805 770	Indigo, E.I ehts	9,368	14,583
" eks & es	1,3:3	20	Spanish srns	1,628	2,494
eakes	1.001	1,531	Ipeeaeeks & bgs	137	174
Wax, Jap. vgtbl. pk	7,092	9,212	Jalapbls	200	398
Camphorpkgs	945	525	Nux Vomiea pkgs	739	927
Cardamomsehts Coehincal, srns, & c.	7,823	9.250	Oil—		
Coce. Ind. bgs, d C.	375	510	Castoreks	505	476
Colombo root pkgs	994	1,754	,,es	6,015	9,875
Cream tartareks	95	52	Palmtns	241	67
Cnbebsbgs	112	198	Cocoanuttns	1,791	2,396
Dragonsblood chts	143	154	Oliveeks, &c.	746	697
Galls, China & Jap.			Aniseedes	228	302
cs	4,459	2,440	Cassiaes	72	248
E.Ibgs	_		Opiumehts, &c.	1,982	2,196 1,016
Trky & Prsn sks	4,037	3,453	Rhubarbchts	1,796	1,010
•			Saltpetre, Nit. Pot.	3,106	3,571
Gum-	4.50	054	tons tons	4,497	2,559
Ammoniae pkgs	179	254	Nitrate Soda "	467	425
Animi & Copal	7.705	7 000	Sarsaparillabls Senna bls, &e.	889	2,262
pkgs	7,365	7,893	Shellae, total ehts	58,644	44,664
Arabie, all de-	7.844	5,818	Termerie tons	801	895
seriptions pkgs		776	Vermilion chts		5
Asafætidapkgs	1,017	110	1 CIMILION GILLO		

A YEAR ago the Clinical Society, under the tutelage of Sir Andrew Clarke, renounced refreshments after their meetings as unphysiological, or, perhaps we ought to say, that their Council did all this for them; at the meeting on Friday last, by a very large majority, it was decided to revert to the ancient and unphysiological custom, and accordingly in future tea and coffee will be served after the meetings.—Med. Times.

## Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1			Мог		. 1	This 3		
ACIDS— Acetic	per lb.	(		to	0 0		s. d. 0 2½ to		0
pure glacial	12	1	) 6		0 9 1 0		0 5 0 6	. 1	9
Benzoic Sublimate . Ex Gum	per oz.		0 6		3 6 0 0		0 0 0 6 <del>]</del>	. 3	6
Citric	n	1 3	6		1 7		1 7		0 7 6
Hydrochloric	per cwt.	. 4	6		7 6	4	4 6	7	6
Nitric	per lb.	0	) 4	(	0 3		0 3 0 4	0	3½ 0
Sulphurie	"	6	) 0{ 5 9		0 1 6		0 0	9	6
Tannic	11	1	4	:	2 9		4	2	9
foreigu	17	1	6	(	0 0	20	63	0	0
ANTIMONY, crude	per cwt.	35	0	36	0	34	0	0 35	0
Arsevic, lump	31	21	0	22	0 0	11	0	22 0	0
BRIMSTONE, rough	22	8		8		8		8	9
GLYCERINE, German	21	10	0	12	2 6	10	0	12	6
refined	33	46	0 6	50		46		50 42	0
IODOFORM	per'lb.	17	0	(	0 (	17	0	0	0
IODINE, dryrcsublimed	per oz.	0	8 <del>1</del> 0	0	0 (	0	0		9
MAGNESIA, calcined	per lb.	5	10	1	0	5	10	1	0
MERCURY PRECIPITATE, red	per bot.	122	6	0		116	3	0	0
PRUSSIAN BLUE	29	2	9 .	0	0	2		0 2	0
SANTONINE	39 31	11 10	6	0	0	11 10	6	0	0
SALICINE	19	35		0 0		35	0	0	0
Alum	per ton	115	0	0	0	115	0	0	0
powder	39	125	0 .	0	0	125	0	0	0
Carbonate	per lb.	0	5 .	0	0	0	5	0	0
crude, white	per ton	560		.640		560	06	40	0
Sulphate	per cwt.	230 83	0 .	. 240	0	23C 83		96	0
Red Oporto, red	"	70 38	0.	. 90	0	70 38	0	42	0 0
Bleaching powder Borax, British refined	21	35		. 37	0	7 32	3 6		6 0
Calomel Chloral hydrate	per lb.	2	6.	. 0	0 7	2	6 5	0	0 7
Liebreich's	22	5		. 6	Ö	5	6		Ö
Sulphate	per cwt.	15 45		. 15 . 55	9	14 45			0
Copperas, green Corrosive Sublimate	per ton per lb.	2	0 .	. 0	0	2	0	0 (	)
Cream Tartar, French brown	per cwt.	127 109	0.		6	126 109	61	0 (	)
Epsom Salts Gianber Salts	12	3	6.	_	0	3	6	4 (	)
Magnesia: Carbonate Pond, Hwds.	19	40 72	0.		0	40 72	0	0 0	)
Morphiæ Murias Phosphorus	per lb.	4	6.	. 5	0 4	4 2	6	5 0	)
Potash:									
Bichromate	>>	0	31.	. 0	0	0	3½	0 (	,
Potashes, Canada, 1st sort	per cwt.	29	o	. 0	0	29	0	0 0	)
Pearlashes, Canada,		46	0	. 46	6	46	0 4	6 6	;
Prassiate	per lb.	0	73. 91.	. 0	0	0	73 01	0 0	)
Sulphate red	per cwt.		ι <u>΄</u>	. 2	0 6		11	2 0	
Potassium:	per lb.				- 1				- 1
Chloride	per cwt.	9	5½ 0	. 0	7 0	9	0	1 7	
Quinine:	per lb.	11	6	. 12	0	11	0 1	1 6	
Sulphate, British, in bottles	per oz.	3	8	0	0	4	0	0 0	
bottles	22		6	0	0 0		lo	0 0 3 8	
Sal Acetos Sal Ammoniac, British	per lb. per cwt.		8	0	81	0 36	8	0 8	
Saltpetre: Bengal, 6 per cent. or	F-02 0 11 0.	55	0	70	1		0 3	. 0	1
under	"	16	3	0	0	16	3	0 0	1

Saltpetre :- (cont.)	1	Last Mouth   This Month
Bengal, over 6 per	, per cwt	s. d. s. d. s. d. s. d. s. d. 0 0 to 0 0
Soda: Biearbouate	"	21 6 22 6 21 6 22 6 7 6 7 9 7 9 0 0
Hwds Carbonate:	"	45 0 0 0 45 0 0 0
Soda Ash	per deg	1030 00100 00
Soda Crystals Caustic	per cwt.	8990 8990
Hyposulphite Nitrate	"	8 0 8 6 8 0 8 6 10 3 10 9 10 3 10 9
Zinc Sulphate	11	12 0 14 0 12 0 14 0
SUGAR OF LEAD, White Brown	. ,,	26 6 0 0 26 6 0 0
VERDIGRIS VERMILION, English	per lb.	0 9 0 10½ 0 9 0 10½ 2 0 0 0 2 0 0 0
DRUGS. China	"	2 2 0 0 2 2 0 0
ALOES, Hepatlo	per cwt.	60 0140 0 60 0140 0 80 0160 0 80 0160 0
Cape, good	27	27 6 35 6 27 6 35 6
Inferior Barbados	21	40 0120 0 40 0120 0
Curaçoa	per oz.	30 0 80 0   30 0 80 0   75 0 90 0
BALSAM— Canada	per lb.	1316 1316
Capivi	,,	1 6 1 7   1 6 1 7
Peru	"	6 6 7 0     6 6 7 0       1 5 1 6     1 5 1 6
Canella alba	per cwt.	27 6 30 0 27 6 30 0
Cascarilla	"	28 0 35 0 28 0 35 0
Peru, grey Callsaya, flat	per lb.	0 6 1 6 0 6 1 6 1 3 2 8 0 6 1 8
quill	"	1040 1040
Carthagena	"	0 10 1 3   0 6 1 2
Cuprea New Granada	"	0 6 1 10   0 6 1 10
Pitayo & Maracaibo	"	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
East India, crown	"	0 3 1 10 0 4 2 8
Coen leaves	17	0 0 0 0 0 71 0 10
BUCHU LEAVES CAMPHOR, China	per cwt.	70 0 75 0 70 0 72 6
Japan Refin. Eng	per lb.	70 0 75 0 70 0 72 6
Tablets CANTHARIDES, China	"	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Russian Camomile Flowers	per ewt.	5 6 6 0 10 0 0 0 70 0 71 0 70 0 71 0
CASTOREUM	per lb.	24 0 35 0 24 0 35 0
CHRETTA DRAGON'S BLOOD, lp	per ewt.	70 0240 0 70 0240 0
FRUITS & SEEDS (see	per lb.	0 6½ 0 10 0 8 1 0
Anlse, China Star	per cwt.	92 6 95 0 92 6 95 0
Russlan Beans, Tonquin	per lb.	27 6 33 0 27 6 33 0 2 0 4 0 2 0 4 0
Cardamoms, Malabar,	12.10.	
good Inferior	"	1 9 2 9   1 9 2 9
Aleppy Madras	"	2 0 3 0   2 0 3 0 1 6 3 6   1 6 3 6 2 0 2 10   2 0 2 10 1 0 4 0
Ceylon	22	2 0 2 10   2 0 2 10 1 0 4 0
Cocculus Indicus	per cwt.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Cubebs	per cwt.	300 0 0 0 320 0340 0
Cummln Fenugreek	"	10 0 12 0   10 0 12 0
Juniper Berries Nux Vomica	"	15 0 17 6   15 0 17 6 7 6 10 0   7 6 10 0
Tamarinds, E. India W. India	22	6 0 9 0   6 0 9 0 9 0 12 0   9 0 12 0
Vanilla, large	per lb.	17 0 20 0   17 0 20 0
FLOWERS—Dalmatlan	"	60 0 90 0 60 0 90 0
Caucasian Honey, Californian	per ewt.	95 0 0 0 95 0 0 0 24 0 38 0 24 0 38 0 25 0 35 0 25 0 35 0
Jamaica IPECACUANHA	per'lb.	25 0 35 0 25 0 35 0 2 10 4 0 2 10 4 0 2 0 4 3 2 0 4 3
Isinglass, Brazil Tongue sort	"	2 0 4 3 2 0 4 3 2 0 5 0
East India West India	"	1 0 4 6 1 0 4 6 2 9 3 10 2 9 3 10
Russ. leaf	"	7 0 10 0   7 0 10 0
JALAP, good	"	
infer. and stems Lexon Juice, f.o.b.	"	
Messina Lime Juice	per pipe per gall.	0 0 0 0   460 0 0 0   1 7 1 8   1 8 0 0   55 0 100 0   55 0 100 0
Liquorice Root	0 11	12 0 20 0   12 0 20 0
MANNA, flaky Musk, Tonquin pod	per lb.	4 6 5 0 4 6 5 0
Grain	,,	50 0 90 0   50 0 90 0
Yunan pod OILS (see also separate list)		
Almond, expressed Castor, 1st pale	per lb.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

	1	Y . 35 . 15					
0.01-1. (1)		Last Month	This Month	0.7	1	Last Month	This Month
Oils:—(cont.) Castor, second	per 1b.	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5. d. s. d. 0 3½ 0 3½	Oils:—(cont.)		£ s. £ s.	£ s. £ s.
Cod-liver	per gall	3 0 4 6	3 6 5 0	SEAL, yellow to tinged	per tun	23 0 to 24 10	23 0 to 24 10
Essential Oils:	Por Auto	0 0 11 1 0	0 0 0 0	hrown	29	18 0 19 0	18 0 19 0
Almond	per lb.	25 0 to 0 0	25 0 to 0 0	Cop	"	52 0 53 0 35 0 36 0	51 0 52 0
Anise-seed, star	17	6 7 6 9	6 10 7 0	WHALE, South Sea, pale	"	19 0 21 0	35 0 36 0 20 0 21 0
" German, &c.	97	8 0 13 0	8 0 13 0	yellow	>> >>	18 0 19 0	17 0 18 0
Bergamot	17	5 6 6 0	5 0 5 6	brown	"	16 0 17 0	14 0 16 0
Cajeput	per bot.	5 6 6 0 3 3 0 0 7 6 11 0	3 3 0 0	Sardine	,,	25 0 27 0	25 0 27 0
Caraway	per lb.	7 6 11 0	7 6 11 0 3 7 3 8	OLIVE, Scville	per ton	40 0 41 0	40 0 41 0
Cassia	per oz.	2 0 3 6	3 7 3 8 2 0 3 6	Gioja	>>	36 0 37 0	36 0 37 0
Cinnamon Cinnamon-leaf	-	0 23 0 0	0 23 0 0	Levant Mogador	"	35 0 36 0	35 0 36 0
Citronelle	79	0 1 0 1	0 11 0 11	Spanish	"	35 10 36 0 40 0 40 10	35 10 36 0 40 0 40 10
Clove	per lb.	3 6 3 9	3 3 3 6	Sicily	"	38 0 0 0	38 0 0 0
Junlper	11	1 6 2 0	1 6 2 0	COCOANUT, Cochin	"	32 0 0 0 27 0 28 0	30 10 31 0
Lavender, Exotio	22	6 9 8 6	6 6 7 6	Ceylon	"	27 0 28 0	27 0 28 0
, Mitcham	31	60 0 0 0	40 0 50 0	Mauritius	"	28 5 0 0	28 5 0 0
Lemon	per oz.	3 6 5 6 0 1 0 1½	3 6 5 6	PALM, fine	"	30 0 0 0 22 5 22/17/6	29 0 0 0
Lemongrass Neroli		7 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	RAPESEED, English, pale	"	22 5 22/17/6 25 15 0 0	22 7/6 22 10 24 15 0 0
Nutmeg	17	0 8 0 0	0 8 0 0	hrown	"	23 5 0 0	22 15 0 0
Orange	per lb.	8 0 10 0	8 0 10 0	COTTONSEED	"	21 10 23 0	20 0 21 0
Otto of Roses	per oz.	12 6 25 0	12 6 29 6	Lard	"	34 10 37 0	33 10 35 0
Patchoull	**.	0 0 0 0	0 0 0 0	TALLOW	"	28 10 45 0	28 10 45 0
Peppermint : American	per lb.	12 0 12 6	12 0 12 6			s. d. s. d.	s. d. s. d.
(H. G. Hotchkiss)	21	16 0 0 0 20 0 25 0	17 9 13 0 28 0 35 0	TURPENTINE, American	per cwt.	26 6 26 9	26 6 26 9
English	21	0 0 0 0	37 0 45 0	Petroleum, refined	per gall.	0 71 0 71	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Japan	11	10 0 14 0	11 0 11 6	SEEDS. Spirit	11	$0  6\frac{3}{4} \dots  0  7\frac{1}{4}$	0 64 0 74
Menthol crystals	"	25 0 30 0	25 0 30 0	CANARY	per qr.	44 0 62 0	44 0 62 0
Rosmary	"	2 6 3 9	2 6 3 9	CARAWAY, English	per cwt.	0 0 0 0	0 0 0 0
Sassafras	37	2 6 0 0	2 6 0 0	German, &c.	"	37 0 50 0	37 0 50 0
Spearmlut	"	12 0 14 0 2 6 0 0	12 0 14 0	CORIANDER	19	15 0 22 0	15 0 22 0
Thyme	per oz.	2 6 0 0	2 6 0 0	HEMP	per qr.	38 0 0 0 42 6 0 0	38 0 0 0 42 6 0 0
OPIUM, Turke	per oz.	12 0 13 6	12 6 14 9	Linseed, English Black Sea & Azof	"	40 0 0 0	40 0 0 0
inferior	por 10.	9 0 11 0	10 0 12 0	Calcutta	"	45 6 0 0	44 0 44 6
QUASSIA (bitter wood)	per ton	120 0 0 0	120 0 0 0	Bombay	"	47 6 0 0	47 6 0 0
RHUBARB, China, good				St. Petersburg	11	35 0 38 0	35 0 38 0
and fine	per lb.	2 3 3 9	2 3 3 9	MUSTARD, brown	per bush.	10 0 12 0	10 0 12 0
Middling to fair	**	1 3 2 0	1 3 2 0	white	51	7 6 9 6	7 6 9 6 36 0 0 0
ROOTS—Calumba	per cwt	25 0 60 0 22 0 27 0	25 0 60 0 22 0 27 0	POPPY, East India	per qr.	36 0 0 0	36 0 0 0
Cus-Cus	17	0 0 0 0	0 0 0 0	SPICES.			
Galangal	17	15 0 18 0	15 0 18 0	CASSIA LIGNEA	per cwt.	28 0 0 0	27 6 28 0
Gentian	37	20 0 24 0	20 0 24 0	Vcra	,,,	18 0 23 0	18 0 23 0
Orriš	11	25 0 40 0	25 0 40 0	Buds	***	41 0 41 6	41 0 41 6
Pellitory	17.	68 0 80 0	68 0 80 0	Cinnamon, Ceylon:		0 0 0 1	0 01 1 10
Pink	per lb.	1 6 0 0 0 0 9 1 0	2 0 3 0 0 9 1 0	1st quality	per lb.	0 9 2 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Rhatany	29	2 4 2 6	$\begin{bmatrix} 0 & 9 & \dots & 1 & 0 \\ 2 & 4 & \dots & 2 & 6 \end{bmatrix}$	2nd ditto	11	0 5 1 2	0 6 1 i
Snake	37	2 0 3 0	2 0 3 0	Tellicherry	"	0 0 0 0	0 0 0 0
SAFFRON, Valencia	33	30 0 35 0	33 0 42 6	Chips	"	0 21 0 5	0 15 0 3
Alicante	19	20 0 25 0	25 0 30 0	Cloves, Penang	,,	0 11 1 2	0 101 1 1
Sarraparilla, Llma	33	0 6 0 9	0 6 0 9	Amboyna,	,,,	0 8 0 93	0 6½ 0 8 0 5§ 0 5§
Guayaquil	33	1 2 1 5	1 2 1 5	Zanzihar	,,	0 5½ 0 5§ 75 0200 0	0 5§ 0 5§ 75 0200 0
Honduras	19	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	GINGER, Jam., finc	per cwt.	38 0 70 0	38 0 70 0
BARRAFILAR	per cwt.	0 0 0 0	0 0 0 0	African	**	30 0 35 0	30 0 35 0
SCAMMONY, Virgin	per lb.	28 0 32 0	28 0 32 0	Bengal	"	21 0 30 0	21 0 30 0
second and ordinary	79	10 0 24 6	10 0 24 6	Malahar	"	0 0 0 0	0 0 0 0
SENNA, Bombay	29	0 21 0 0	0 21 0 0	Cochin	,,	34 0 105 0	34 0105 0
Thunivelly	19	0 3 1 2	0 6 1 3	PEPPER, Black, Malabar	per lh.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Alexandria	17	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 9 1 6	Singapore	"	0 93 0 10	0 93 0 104
American	17	1 3 0 0 0 0 101 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	White	"	1 2 1 8	1 2 1 8
Sqt.tt.1.9	"	0 1 0 21	0 1 0 21	MACE, 1st quality	"	1 4 2 0	1 4 2 0
GUMS.	"	£ 8. £ 8.	£ s. £ s.	2nd and inferior	"	1 1 1 2	1 1 1 2 2 41 3 8
Ammoniaci, drop	per cwt.	2 5 2 10	2 5 2 10	Numers, 78 to 60 to lb.	1)	2 41 3 8	2 41 3 8
Animi, fine washed	>>	15 0 17 0	14 10 16 0	90 80 ,,	"	2 3 2 5 1 7 2 3	2 3 2 5 1 7 2 3 0 2§ 0 3
ARABIC, pale picked	"	12 0 15 0 2 15 3 10	11 0 14 0 2 15 3 10	132 95 ,, PIMENTA	**	1 7 2 3 0 23 0 28	2 3 2 5 1 7 2 3 0 2§ 0 3
sorts, mid, to fine	"	1 10 2 6	1 10 2 6	2	"	-3	
TURKEY, pick, gd. to fin.	79	8 10 10 0	9 0 15 0	VARIOUS PRODU	CTS.		
second & inferior	12	7 0 8 10	7 0 8 10	COCHINEAL—	men 13	1 6 1 9	1 6 1 101
Astropublican to Sp	19	6 0 6 10	6 0 7 5	Honduras, black	per lb.	1 6 1 9	1 3 1 6
ASAFGETIDA, cm. to fin. BENJAMIN, Siam, 1st	23	1 10 3 0	1 10 3 0	Mexican, black	19	1 4 1 9	1 4 1 9
& 2nd		14 0 32 0	14 0 30 0	,, silver	"	1 2 1 4	1 3 1 5
Sumatra	33	5 0 10 0	5 0 10 0	Teneriffc, black	1)	1 6 2 0	1 6 2 0
	"	8. d. s. d.	s. d. s. d.	" silver	,,	1 3 1 5 48 0 55 0	
COPAL, Manlla	19	15 0 75 0	15 0 75 0	GALLS, Tky blue	>1	45 0 48 6	48 C 55 O 45 O 48 6
Angola, red	33	145 0152 6	145 0152 6 75 0 80 0	INDIGO, Bengal	"	1 9 6 7	1 9 6 7
Damar, pale Euphorbhum	79	75 0 87 6 10 0 15 0	75 0 80 0	Madrag	"	0 5 3 4	0 5 3 4
GALBANEM	per lb.	0 3 0 10	0 3 0 10	Kurpah	37	0 10 4 9	0 10 4 9
GAMBOGE, picked pipe	per cwt.	230 0250 0	240 0280 0	" Oude	,,	1 0 5 0	1 0 5 0
GUAIACUM	per lb.	0 6 2 1	0 6 2 1	Guatemala	non-court	1 3 5 8 3 9 10 0	1 3 5 8 3 9 10 0
KINO	per ewt.	28 0 30 0	40 0 55 0	ROSIN, American	per cwt.	28 0 0 0	28 0 0 0
KOWRIE, sorts	37	30 0 50 0 110 0 200 0	30 0 50 0 110 0200 0	SOY, China	per gall.	1 71 0 0	1 5 0 0
Mastic, picked	per lb.	110 0200 0 2 9 3 3	2 9 3 3	WAX, BEES, English	per cwt.	E0 0 . E0 0	£0 0 £0 0
MYRRH, good and fine	per owt.	100 0 150 0	100 0150 0	Jamaica	,,	1 6 15 7 10	6 15 7 10
ordinary to fair		80 0140 0	80 0140 0	East India	,,	6 U 7/12/6	6 0 7/12/6
OLIBANUM, p. drop	,,	39 0 45 0	35 0 50 0	VEGETABLE, Japau	,,	£3 15 £4 0 0 4 0 6	£3 15 £4 0 0 4 0 6
amber and yellow		29 0 37 0	29 0 37 0	Paraffin	per lb.	£3 5 £3 10	£3 5£3 10
SENEGAL. SANDARAC		40 0 45 0 60 0105 0	40 0 45 0 60 0105 0	WOOD, DYE, Bar		7 0 18 0	7 0 18 0
SHELLAC, Orange		60 0105 0 64 0 85 0	64 0 85 0	Cam	,,	16 0 30 0	16 0 30 0
LIVER		58 0 63 0	58 0 63 0	Fustic, Cuha	"	4 0 6 0	4 0 6 0
THUS		25 0 0 0	25 0 0 0	Jamaica	**	4 5 5 15 7 10 8 5	4 5 5 15 7 10 8 5
TRAGACANTH, leaf	97	140 0280 0		Logwood, Campeachy Jamaica	,,	5 0 5 10	5 0 5 10
OILS.	19	20 0180 0 £ s. £ s.		Lima, first pile	11	8 5 8 10	8 5 8 10
SEAL pale	per tun			RED SANDARS	, "	5/17/6 6 9	
			N. Contraction				



#### Pharmaey and Polities in Brussels.

M. Van de Vyvere, the Secretary-General of the International Pharmaceutical Congress at Brussels, writes to us in reference to the statement we quoted last month from M. Genevoix, of Paris, who detected among the organisers of the Congress an undercurrent of bitter political hostility. M. Genevoix said that "MM. Van Bastelaer, the president, and Van de Vyvere, secretary, belong to the most advanced section of the Catholic party, while the Royal Society of Pharmacy of Brussels is directed by strong Radicals." This notion of M. Genevoix, M. Van de Vyvere declares, is only one of the former gentleman's dreams. The statement, at least as regards himself, M. Van de Vyvere says, is incorrect; he is not one of the ultra-Catholic party, and is, indeed, accused of being too progressivist. In the committee there were men of all parties, and no question of any political difference occurred. All were animated with the single desire to work for the progress of science and for the interests of humanity. In Belgium, adds our correspondent, we do not mix up political discussions with confraternal and scientific questions. Now, M. Genevoix.

#### Poisonous Legislation.

To the Chemist and Druggist-

SIR,-Referring to the frequent reports in your paper of poisoning by carbolic acid and other dangerous chemicals of occasional domestic utility, there is little doubt that coroners have plenty of work in prospect, unless a speedy alteration of the present system is effected. There is nothing to be expected from the class of persons who assume to legislate on matters of such vital importance, unless it is by sheer scandal and compulsion. These money-bag class legislators, whose energies are entirely engaged in scheming and plotting to monopolise for themselves every source of power and income in the country, compel the chemist alone to undergo an expensive education for his business, and, in their pious horror of monopoly for everyone but themselves, allow any description of person to retail dangerous poisons without restraint, under the knavish pretence of free trade. It will not be until some of these righteous, high-minded, and high-handed gentry have been themselves removed to the mansions of the blest (or otherwise) by the operation of carbolic acid or similar agents that the survivors will arrive at the conclusion that something must be done, in spite of the opposition of third-rate medical practitioners, who would prefer to see the public poisoned rather than the retail chemist should be advanced to the smallest privilege or consideration. The election is now at hand, and if any "money-bag" or "professional gentleman" candidate loses his election by a very few votes, it would be some satisfaction to know that the entire indifference of the retail chemists in the district contributed to his loss.

It is useless to expect anything from the Pharmaccutical Council; some of the members are too rich to care about exerting themselves for the benefit of the public or to sympathise with those who have rothing but their business to depend upon for existence, and others, who are engaged in a demi-semi-wholesale variety of trade, prefer to consult the interests of their own pockets by pandering to the inferior ranks of the medical profession.

sion. I am, yours faithfully, NEMESIS.

#### Sale of Mineral Waters.

To the Chemist and Druggist-

SIR,—Certain interested persons having spread a report that our firm has ceased to exist, and that we are no longer in a position to execute orders for Apollinaris, Friedrichshall, and Hunyadi Janos waters, may we be permitted to give a

denial in the columns of your valuable journal to these statements.

Fair and open competition is a thing always to be desired, but when a firm permits its representatives to make such mis-statements we think such proceedings should be exposed, and, as you will see by our advertisement, we offer a reward for information which will lead to the detection of any persons who may spread such reports.

November 12.

We are, faithfully yours,
INGRAM & ROYLE.

#### Novel Mouse-trap.

To the Chemist and Druggist-

SIR,—On examining a case of flask oil yesterday, I found that the mice had been at it and gnawed a cork so that it had fallen inside the flask, and no less than three mice had, in their eagerness for olive oil, followed suit by forcing themselves through the neck of the flask.

Thinking this might interest some of your subscribers, and perhaps be a wrinkle for those who are bothered with the pests, I send this to you.

Yours, &c.,

Church, October 14.

IVAN.

### Patenting the Application of Hypophosphorous Acid. To the Chemist and Druggist—

SIR,—I notice in your issue of October 15 a paragraph upon my recent paper on "Permanent Ferrous Iodide." Would you kindly allow me to emphasise what you have already called attention to, viz.:—Firstly, that the use of hypophosphorous acid for the preservation of ferrous iodide is not patented or protected in any way whatsoever. Secondly, that its use in the preservation of other salts of iron is not patented or protected if such salts are intended for use in medicine or for medicinal purposes. Thirdly, that when sending my paper to the honorary secretaries of the Pharmaceutical Conference I did not append any comment upon the preservation having been provisionally protected in certain ways, simply because I considered such comment quite unnecessary, as being romane to the title and intention of the paper.

9 Bull Ring, Birmingham. ALFRED E. ROBINSON.

#### Caution .- Sale of S.V.R.

To the Chemist and Druggist-

SIR,—Your readers should know that several chemists in a Southern watering-place have been fined by the Excise for selling 6 oz. S.V.R. in response to a written order, in feminine writing, somewhat as follows:—"A bottle of lavender water, best; a large bottle of eau-dc-Cologne; a small bottle, about 6 or 8 oz., of best spirits of wine."

Yours very truly, W. J. CHURCHILL.

#### Ext. Ipeeae. Acet.

To the Chemist and Druggist-

SIR,—Probably some of your readers will be buying extipecac, acet. for vin. ipecac, B.P., 1885. I have been making some of the extract, and the average produce has been  $4\frac{1}{8}$  grains from 1 oz. of the root. Of course I work on much larger quantities than this, but the average is the same. The new B.P. fails to give the extractive produce, and as our retail friends when buying would be undecided as to the relative strength, I beg to submit my experience.

Yours respectfully,
Edinburgh. W. RICHARDSON.

At this rate ext. ipecac. acct. will be the dearest extract in the price-list, for, after covering cost of labour, &c., 2l. per oz. will leave but a small margin of profit. There is, however, some mistake. We have submitted the statement to a pharmacist who has had some practical experience of the matter, and his yield was, not  $4\frac{1}{8}$  grains, but 82 grains—i.e., twenty times as much as our correspondent got. Ipecacuanha contains about 4 grains of emetin per oz., let alone extractive matter. No doubt "the extractive produce" will vary with different samples of root.

#### Felon-Felon-wort.

#### To the Chemist and Druggist -

SIR,—The letter of "A Learner" in your issue of last month shows not only the advantage of a knowledge of botany, but (on the part of your correspondent) a somewhat exaggerated notion of the acquirements of "Major and Minor men," and an imperfect acquaintance with "books relating to botanical medicine." On the very first page of Culpepper's "Herbal," under the head of Amara dulcis, I read:—"Besides Amara dulcis, some call it "mortal" [? morel], others 'bitter-sweet,' and others 'fclon-wort.'" I need not add a list of the many virtues Culpepper attributes to the plant, but may mention the one from which, apparently, it derives its name:—"Country folks (says he) commonly use to take the berries of it, and, having bruised them, they apply them to fclons [whitlows], and thereby soon rid their fingers of such troublesome guests."

I am assured by a friend that Gerade applies the name "felon-wort" or "felon-wood" to a totally different plant from bitter-sweet, but I think this is a mistake, as I have searched "The Great Herbal" (Johnson's, 1636) carefully without finding it, nor does it appear in any of the numerous indices. It is, however, to be found in several modern dictionaries and glossaries. Thus, the Imperial Dictionary has "Felon-wort, a plant of the genus Solanum"; and Halliwell, "Felon-wood, the herb bitter-sweet." It is current in Cumberland, and is given, I believe, in the glossary of that county; and though it does not occur in Mr. Peacock's glossary of this district, it is commonly used here, where the herb itself is sometimes, though rarely, given to eattle for felon.

I should be very glad if any of your readers could give me the history of this word "felon" or "fellon." It is applied all over the North to a disease in cattle; it signifies also a swelling (especially of the finger-joints); and Gerade speaks in addition of "the 'felonie,' or purging of choler upwardes and downwardes," and, again, of "the overmuch purging of choler, called the 'felonie." Is it the same word in each ease; and, if so, how did it come to be so variously applied? Halliwell quotes from an old MS. poem, in which it occurs in an ambiguous sense, and might indicate almost any of the aforementioned complaints:—

Somme for envye schul have in lymes As kiles, 'felones,' and postymes.

I suspect it is the same word that we give to a malefactor, meaning originally cruel, harsh; as in Henry the Minstrel's "'felloun' man of war"; and Spencer's "felonous," which comes, according to Skeat, from the old High German fillan, to torment or flog, and is the source of the Anglo-Saxon fell, a hide. But it would be curious to trace it downwards to its various applications.

I am, sir, &c.,

Epworth, Oct. 30. C. C. Bell.

#### Notes from Sydney.

#### To the Chemist and Druggist-

In an article contributed to your journal last March, I remarked that pharmaceutical politics in the colony were likely to become extremely lively, and I fear my prognostication is now but too true. In Sydney the Pharmacutical Society is awakening to a knowledge of its responsibilities, and in the protection of its members has had one or two prosecutions of late. A report of their recent meeting will give you an idea of the bad moral tone pervading even the profession of pharmacy and chemistry. That a member of a scientific body and a lecturer to young students should openly sell a business to an unqualified man, one of the conditions of the sale being that his name might be used until the necessary licence should be obtained by the purchaser, sufficiently demonstrates this. It fairly amounts to a sale of the diploma, and the Society here will show themselves decidedly weak if they do not take further steps in the matter beyond the paltry fine imposed by the magistrate.\*

You asked me for some experiences of an assistant's life, should I choose one. My advice is that of "Punch" to those about to be married, "Don't." The hours are long, the pay is

not so high as sometimes thought, 3l. to 3l. 15s. being an average outdoor salary for a good assistant, and by far the better plan seems to be to get in some rising place and start for oncself. A friend of mine, and a member of the Pharmaceutical Society of Great Britain, came out some three years ago, and after six months of working for others got perfectly disgusted, invested a twenty-pound note in fitting up a wooden shanty in a rising suburb, and now he takes between 12l. and 16l. a week regularly, with good profits, The fact that he is now about to open in another suburb a neatly-fitted shop speaks for itself. Go thou and do likewise! The towns on the rise are without count, and for an energetic man success only seems a matter of a few months. So much for assistantships. And yet masters here complain that a really good assistant is very difficult to obtain, and the reason is not far to seek, for they work them too much, and a good man will soon see a better way of making a competence than by standing behind another man's counter from 9 o'clock in the morning to 9 o'clock at night.

The conference convened by the Society here has fallen through, not so far as I can see from any fault of the originators. The Victorians charge us with not having prepared any programme of the subjects to be discussed, but in the circular sent out by the Secretary, the advice of the various councils was asked as to the matters they would like brought forward. This, it seems to me, was the best plan, and courteous, but the Victorians did not see it, so the time of the Conference has passed and it is not to be.

Mr. Quayle, Gold Medallist of Owens College, Manchester, has delivered a course of lectures upon Chemistry to the students of the Pharmaceutical Society in their room in Phillip Street, and though on all sides one hears high eulogy of the lecturer great complaint is made of the paucity of pupils and of the lack of enthusiasm in the study of chemistry.

F. J.

44/72. British Chemists and Druggists' Trading Association (Limited).—Servel writes:—"I paid 4l. deposit, through the London and Westminster Bank, for four shares in the above company. As the concern was not going on, I wrote last August for the deposit to be returned, and my letter came back with 'gone away' written on the back. I then wrote to Mr. J. C. E. Weigall, 32 Fenchurch Street, had no answer; and a second letter, no answer; and a third (registered), no answer."

21/70. Fair Play writes:—"I, like your correspondent 'A. McI.,' paid 1l. deposit for one share in the proposed British Chemists and Druggists' Trading Association (Limited), and on making application for the return of the deposit my letter came back, marked 'gone away.' Thinking the Association had probably changed address, I wrote shortly after to J. C. E. Weigall, Esq., 32 Fenchurch Street, E.C., and no notice whatever was taken of it."

[Evidently this is a matter for the directors to see to. We shall be glad to hear from them. Other chemists who sub-

scribed are invited to write to us.—Ed. C. & D.]

#### Legal Queries.

19/135. A. B.—Anyone may sell methylated finish; no one may sell methylated spirit without a licence, which costs 10s. per annum. This would apply no matter under what name the spirit might be sold. We do not think a licence for selling methylated spirit is granted to persons holding a licence for the sale of pure spirits.

17/73. A. II.—You omit to enclose the label you allude to-We have heard from several sources that the Board of Inland Revenue have been suing a number of London chemists lately for infringment of the Medicine Stamp Act, and we hear, as usual, that the authorities are straining the law. We do not suppose that anything new has transpired, and we think we have explained the law as it stands times enough to satisfy most readers. There are several grounds, on either of which a medicine may be liable to the medicine stamp duty:—

If it is expressly named in the schedule of the Act.
 If it be a preparation for either external or internal use as a medicine for the human body, and any occult secret

<sup>\*</sup> Since writing the above I learn that at a meeting of the Council of the Pharmaceutical Society the offending member's name has been struck off the rolls, subject to the approval of the Governor and Exceutive Council.

or art be claimed for making the same by the person uttering

- 3. If for such the person making it claims any exclusive right or title to make it. (This exclusive right may be claimed by the name being in the possessive case, as, e.g., "Holloway's Pills."
  - 4. If the article has been patented.
- 5. If either with or on the bottle, or by other printed or written advertisement, the preparation be recommended to the public as a specific or "as beneficial to the prevention, cure, or relief of any distemper, malady, ailment, disorder, or complaint incident to or in anywise affecting the human body."

Simple drugs are expressly exempted; and preparations which produce aërated or mineral waters are also exempt.

- 35/62. S. W. M.—Yes; the preparation as labelled and advertised by you is liable to medicine stamp duty.
- X. Y. Z.—Putting a card in the window offering "advice gratis" would not be an infringement of the Apothecaries' Act. But it might be an infringement of that Act if the a vice were actually given in connection with the supply of medicines. What the Act forbids is for a person other than a licensed apothecary "acting as an apothecary."
- V. G. asks whether the shopkeeper who buys a 2s. 9d. box of Whelpton's pills and breaks the duty stamp to sell them out in pennyworths, is liable to the patent medicine duty or not? Certainly; he is a patent-medicine vendor, and must take out a licence.
- 21 73. E. C.—You will see from our September number (page 523) that the Chemists' Trade Association filed notice of opposition to the registration of "Wild-cherry Balsam" by Mr. White, of Leeds. You might learn from the secretary how the case stands at present.
- 60'62. Subscriber. (1) For a treatise on surgical dentistry you cannot do better, we think, than get Tomes' "Manual," published by Churchill. (2) Can I use the term "Hop Bitters" if I do not copy any trade-mark? This question, or something like it, occurs regularly every month. It is impossible to answer it. The proprietors of hop bitters, of course, claim an exclusive right in the combination of the words. They might or might not bring an action against you. If they did they might or might not win it. There is no fixed rule of law in regard to this, and precedents point both ways. But generally a court will hold that you are not entitled to take advantage to yourself of property which some one else has created. Similar remarks would apply to "Blood Mixture."
- 55.71. Camphor.—We think your label does not render the preparation liable to medicine-stamp duty, if, as you say, you do not in any other way advertise the article. But, if you want to be sure, you should ask the Board of Inland Revenue, Somerset House, W.C.
- 10/140. A. L. asks, "Can a chemist (registered) be sworn as a special constable if required, such as on election days or (iny Fawkes day?" He cannot claim any special exemption; but why does our correspondent take such a gloomy view of things?
- 70.70. J. A. J.—There is no official recognition in any part of the United States of the British Minor certificate. Its possession would no doubt be of use in business, and in places where an examination is required before commencing business it might influence the examiners. But whatever fees were chargeable would have to be paid. We have no special knowledge of the position of chemists' assistants in the city of Washington, but we know enough of the conditions of sociology to assure you that, if at any time it held

out any particular advantages, these would most certainly be seized upon by an influx of assistants from other eities, bringing the position of affairs to a level long before you could get there.

- 6/72. A. B.—Glycerine and its Application to Pharmacy.—You will find this subject fully treated in THE CHEMIST AND DRUGGIST of March-April, 1883, in articles by M. F. Harris Alcock.
- 71 1. Ipecacuanha.—The following is a Glasgow formula for Syrup of Scammony:—

 Pnlv. scaumonii virg..
 3iv.

 Pulv. jalapae
 3iv.

 Rad. zingiberis
 3j.

 S. v. r.
 3xiv.

Percolate and displace with water.

Infuse for twelve hours and strain; then make a syrup with 1½ lb. of sugar, to which add the above tineture and as much ginger syrup as will make 40 fluid oz.

#### 70,73. T. W. I.—Liq. Pepsin Co. e. Bismuthi.—

Pepsin		 	••	 • •	3iij.
Acid, hydrochlor	. dil.	 		 	3iij.
Acid, hdrocyanic	dil.	 		 	3ss.
Extract, opii liqu	id.	 		 	3j.
Spt. ehloroformi		 		 	5j.
Tinet, cardam, co	),	 		 	3ij.
Liq. bismuthi .		 		 	3×.
Liq. cocci .		 	• •	 	q.s.
Aquae		 		 	q.s.

Digest the pepsin with the hydrochloric acid and 4 oz. of water for two days; then filter, and wash the filter with water to 5 oz.; add this to the liquor bismuthi, with sufficient cochineal to give the desired colour; then add the rest of the ingredients, make up to a pint with water, and, after allowing to stand for a day, filter if necessary.

- 69/70. M. A. Whichelo,—Chemistry of Ginger.—The work of Dr. J. C. Thresh, as you will find it recorded in the "Yearbook of Pharmaey," 1879, 1881, and 1882, is most complete and exhaustive. There is no monograph that we know of at all equal to Dr. Thresh's papers.
- 139/21. Nil Desperandum.—Considering the nature of the substance, we expect the method to be this:—The crystals are placed in a flask (which is to be kept cold during the operation), and the potassium in small pieces dropped in untiticeases to combine. You understand, we hope, that you car buy essence of lemon much cheaper than you can make it artificially. The artificial oil is a chemical curiosity.

Tartarie Acid Substitute.—Acid sulphate of soda or potash obtained as a bye-product in the manufacture on itric acid, and purified by re-crystallisation.

- 70/42. P. H.—You will get an effective result by using "white frost," which you can obtain through a sundrice house. It is used in theatrical displays.
- 70/33. J. A. H.—To Glaze Confections.—In the fina stage of panning, the revolving-pan gets a very slight rub c white wax while it is warm. It is then allowed to becom cold, and the lozenges then put into it for the last polish.
- 71/2. Nemo.—From 5 to 10 minims to the oz. is sufficien carbolic acid to add to tooth-paste. Do not let it have to proncunced an odour of the antiseptic,

71/5. Viridis.—Printers' Roller Composition.—One part of good glue soaked in cold water overnight and dissolved in 2 parts of treacle.

68/21. Sinadian.—Manual of Dyeing.—The following text-books cover all the ground:—Slater's "Handbook of Colours and Dyewares," Lockwood, 7s. 6d.; "Bleaching, Dyeing, and Calico Printing," Churchill, 5s.; Jarmain's, "Cantor Lectures on Wool-dyeing," Simpkin, Marshall & Co., 2s.; Hummel's "Dyeing of Textile Fabrics" (in preparation), Cassells, 5s.

Slater's book deals entirely with dyeing materials, the others chiefly with the principles of dyeing. Hummel's work has been "in preparation" for a long time, but will, we believe, soon be ready. It ought to be a first-class production, and quite up to the time of day, the author being Professor of Wool-dyeing in the Yorkshire College, and one of the examiners of the City and Guilds of London Institute.

Unguentum Styracis. Prepared storax, 1 oz.; lard, 2 oz Mix.

60/32. H. C. B. = Sponge powder. — Hudson's soappowder. Essence of linseed (comp.), (C. & D., 1883, page 599).—

.. mxlv. Chlorodyne .. miv. Ol. anisi ... Tr. Tolutance ... .. 3ss. •• . . .. . . .. 3ss. Tr. senegæ .. 3iss. Oxymel scillae ... .. ad 3iii. Inf. lini. ..

Add the oil of aniseed dissolved in the tr. tolu to the infusion, then the chlorodyne and other ingredients, keeping the bottle well shaken all the time.

Dose.—5j. to 3ij.

Yensh.—Bandages.—Three parts of chalk and one of powdered acacia, mixed and sifted. Plaster of Paris alone is better and less expensive, but strong starch mucilage is generally used.

69/72. C. J. B.—Mother's Friend.—This is a good carminative mixture, which may suit your purpose:—

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Rub together in a mortar, add 4 oz. of water, stir, and filter. To the filtrate add —

 Sodii bromidi
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 Эј.

 Potassæ bicarb
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 ...

 Tr. cardam, co
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 ...

 Syrup, rhœados
 ...
 adl švj.

Dose.—A teaspoonful in a tablespoonful of warm water, and the child allowed to sip it slowly.

69/44. T. W. M. asks how to remove varnish from cotton yelbs without injuring the fibre. Benzine and acid sulph, have not answered. Steep the yelbs in a warm solution of caustic soda (\frac{1}{2} oz. to the gallon) for not more than half an hour, then wash well with warm water. Next steep them for a few minutes in water containing an ounce of sulphuric acid to the gallon; finally wash with cold water and dry.

26/72. E. A. W.—You will obtain all the particulars you require from either the Secretary, London University, Burlington House, London, W., or from the Secretary, Victoria University, Manchester.

51/66. X. Y. Z.— James Elliott & Co., of 13 Langham Street, Oxford Street, W., had an exhibit at the Inventions Exhibition of lustra decoration, for painting on velvet in irridescent metals. Should they not be able to help you, communicate with Pavitt & Sons, 70 Southampton Row, W.C

#### Telegram Code.

To the Chemist and Druggist.

We have received several suggestions upon this subject, mentioned last month. We go into the matter more fully in the Diary for 1886. Mr. E. H. Metcalfe, of Great Malvern, suggests the desirability of every wholesale house apportioning to their customers a number by which they can recognise the senders. As five figures can be sent as one word, the number 99,999 would be reached before extra payment had to be made, and those houses who have customers reaching to six or seven figures would no doubt allow the extra charge.

Mr. Charles B. Allen, of Kilburn, writes:-In Messrs. Newbery's illustrations I notice that three words are allowed for the client's address. I think one only should be necessary, for, if wholesale houses will simply allow such of their customers as think fit to register a telegraphic address with them, one distinctive word will suffice. All the "adoptions," together with corresponding full addresses, could easily be registered in a small indexed book without entailing much work upon the wholesale firms, whilst the advantage to the retailer would be very great. One, and the only, firm to whom I have mentioned the matter fell in with the plan instantly, and are waiting to see if their customers will require such registration. As there was just the doubt that the Post Office authorities might object to the use of codified addresses, as interfering with their own registration fees, they were written to upon the subject, and intimated that no objection could be raised. Whilst upon this matter, I might also express a hope that some general code, drawn up by some one like yourself, should be adopted by the trade at large without delay.

137/34. The Magic Snuff which you sent us is powdered white hellebore. Not a safe thing to sell for toothache, we would say.

65.63. Custard-powder.—In reply to T. W., who does not find our last month's formula satisfactory, owing to the tragacanth, which prevents it mixing, we give another and better formula:—

Rub up the turmeric with 2 oz. of corn, and sift; mix the flavour with 2 oz. in the same way, add the rest of the corn, and sift.

Other flavours, such as lemon and cinnamon, may be used.
Directions same as last, but the custard does not require
to be baked.

69/3. Chlorine, B.P., quoting Attfield's "Chemistry," says:
—"The official hydrochloric acid contains 31.8 per cent. by
weight of gas, and its sp. gr. is 1.16. Work out a sum showing
what volume of it will be required theoretically to mix
with black oxide of manganese for the production of 1 gallon
of chlorine water, 1 fluid oz. of which contains 2.66 grains
of chlorine."

Two molecules (= 73) of HCl yield one atom (= 33.5) of Cl, for

 $\mathbf{MnO}_2 + 4\mathbf{HCl} = \mathbf{MnCl}_2 + \mathbf{Cl}_2 + 2\mathbf{H}_2\mathbf{O}$ 

Therefore

 $35.5:73::2.66 \times 160 = 875.177$ 

the amount of volume HCl in grains required for the gallon. And as 100 grains of B.P. acid contain 31.8 (now 32, we may point out),

31.8:100::875.177 = 2,752.12

the weight in grains of acid hydrochlor. B.P. required. From this the volume is found by dividing by the specific gravity of the acid.

65/23. Veritas.—Excessive sweating of the hands is alleviated by lin. belladonnæ, applied twice or three times a day. Wash only with carbolic soap, 10 per cent.

42/68. A Reader of the C. & D., who "has got a very good English education," is energetic, and so on, but "is at present in a country town where there is not any facility whatever of obtaining a knowledge for examinations," asks our advice as to a suitable place where the most time is obtainable for study, and our opinion as to his future course. We are inclined to think that this young gentleman is rather disposed to rely on others than on himself. There is no druggist's shop anywhere in the United Kingdom where "there is not any facility whatever of obtaining a knowledge for examinations." The subjects of study are before him every hour. The Pharmacopæia is a text-book, and he can surely get some commentaries on it which will aid him to understand it. Our forthcoming Diary will help him considerably. In time he may get a situation in a town where he can join evening classes, and he might try a guinea's worth of postal instruction. Then, perhaps, after studying as hard as he can by himself he may in two or three years find himself in a position to take a few months for methodical study at one of the schools, where he will get all his heterogeneous information arranged for him before facing the examiners. This is how hundreds of other young men get on; why should not he?

22/68. Majer.—We suppose Dr. Greenhow referred to the Institute of Chemistry. Get the prospectus of the Institute from the secretary, Somerset House Terrace, London, W.C., and judge for yourself whether it will answer your purpose to aim at association with the Institute. There are always chances of turning chemical knowledge to account, and pharmacists especially can utilise such chances. But some men possess in a much greater degree than others the knack of employing their knowledge skilfully. There are still large numbers of people who are influenced by capital letters after a name; so get such if you can. But get sound knowledge in preference to them.

2/71. Keeping Lieorice.—Nemo writes: One of your correspondents was inquiring the best way to keep licorice-root fresh. The way that I generally adopt is to keep it in a nice clean, wide-mouth jar, with a good fitting bung. I have kept licorice-root and Solomon's seal quite nice and succulent for a long time (some months). It is a handier way to keep it than in sand.

62/15. Man Oil.—I remember, so lately as eighteen years ago, while assistant in a house in Dublin, seeing a winchester, half-full of a pale clear oil, labelled "Ol. Humanis." I understood it had been there for years. There had been a big trade in it at one time, as it was supposed to be a lubricant of the joints. I believe it was obtained from a neighbouring dissecting-room, the porter of which was in the habit of boiling the bones for the purpose of procuring it.—R. S. D.

67/69. J. L.—As you submit your circular for our criticism, we are bound to remark on several faults which we find in it. As a general assurance that you are alive and are carrying on the business of a chemist and druggist it answers its purpose, but you fail to produce any effect on the reader in regard to any one of the articles you announce, because you disperse the interest. To make an impression you should devote a circular specially to any one of your preparations; or, at any rate, to not more than two or three, and these of somewhat the same character. Then, too, when you bring before the public a preparation for a particular complaint, it is good policy, and polite to the public, to show that you know all about that complaint. When a person with a cough or a bad liver meets with a description of his symptoms which astonishes him by its minute accuracy, he says, when he reads of the remedy, "Why, that must be the very thing for me," and he goes and buys it, and takes it in the assurance of faith. But your very bare description of your pills cannot arouse any very hearty enthusiasm in the soul of your most bilious customer. These announcements are worth taking more trouble with.

69/68. Pill-machines.—In reply to the inquiry of W. & S., Mr. J. F. Golding, 172 Albany Street, London, writes:—"I

bought a second-hand Cocking's pill-machine, and have turned out as much as 7 lbs. of pill-mass in seven hours under favourable conditions. The machine wants a lot of humouring unless the mass is of the right consistency; sometimes it refuses to cut the strips, when sponging down the cutting-roller with thick mucilage, or some other dodge, must be resorted to.

Under favourable conditions a great saving of time is effected, but the pills do not equal in appearance those made

by the ordinary machine.

23/73. Subscriber.—You will find formulæ for Putz Pomade on page 63 of our issue for January last.

66/57. Pomade Perfume.—Mr. G. A. Elliott, Campbelltown, writes:—"B. M. L.," 40/57, will find this a good recipe:—

	Ol. citronell		 	 	 Зij.
	Ol. amygdal ess.		 	 	 Зij.
	Ol. santal flav.		 	 	 Зij.
	Ol. rosmar.		 	 	 Зij.
	Ol. lavand. anq.	opt.	 	 	 3vj.
	Ol. verbena		 	 	 3⊽j.
	Ol. bergamot		 	 	 Ziij.
	Ol. lemon		 	 	 ãvj.
I.					

17/71. Sanguine.—We cannot tell what are the prospects of the "Curriculum" by-laws. Even if sanctioned a notice of some three or four years will be given before the new scheme is enforced.

71/43. *Ignoramus*.—See last number, page 622, 51/25.

68/55. Polish.—"Muriate," a misprint for "spirit." Use ordinary liquor ammoniae.

71/14. Fungus.—Let [us know exactly how the books are affected by the mildew. You are too vague.

Whitewash is made in a great many ways, but the ingredients are the same, viz., whiting, glue, and water. A good way is this: Steep the whiting in water for a night, and reduce to a uniform paste in the morning; add the glue size (cold), and thin with water. For the outside of buildings, and generally for rough surfaces such as the inside walls of outhouses, freshly-prepared milk of lime is used while it is hot.

140/24. A. J. T.—Concentrated Waters.—Let us know which. A general formula is impossible.

This received too late for extended experiment, but we have succeeded in producing a creamy mixture by rubbing up the ointment with the ammonia of the liniment, then adding the other ingredients (mixed) gradually, assisting combination by addition of a little pulv. saponis occasionally. Will some of our young readers try what they can make of this unreasonable mixture?

#### Appeals to Readers.

72/8. C. W. would be glad if anyone can inform him of any make of gelatine suitable for making a clear white glycerine jelly without filtering or larifying.

[Has C. W. tried Cox's or Mackay's?]

71/62. Subscriber wishes a good recipe for Danish Butter Colouring, with an easy method.

### PURE OXIDE OF ZING (HARRIS & CO.'S)

In 1-lb., 2-lb., 4-lb., 7-lb., 14-lb., and 28-lb. Boxes, 1/- lb. Special quotations to large buyers.

N.B.-EVERY PACKAGE HAS OUR SEAL UPON IT.

Great care is used in the preparation of our Oxide of Zinc, and it is superior to the ordinary Oxides sold as B.P., which frequently contain Arsenic and Sulphate of Zinc in sufficient quantities to prove irritating to the skin.

PHILIP HARRIS & CO.. Manufacturing Wholesale BIRMINGHAM.

# CRYSTAL PALACE BOND'S GOLD MEDAL MARKING INK

(Prepared by the Daughter of the late John Bond)

"SOMETHING NEW."

A large glass stoppered bottle of Marking Ink (twice the size of an ordinary 1'- bott'e) and Glass Pen specially made for the purpose, complete, 1/6 handsomely mounted on show cards, 90 - gross. Try a sample ½ dozen; we will guarantee quick sale and repeat order.

WORKS: 75 SOUTHGATE ROAD, LONDON, ENGLAND.

BATTLE'S VERMIN KILLER. (Mice eat it readily, and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, sat it readily, tumble over, and die on the spot. Rate usually die in their runs.—Parties troubled with Vermin may be clared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

TESTIMONIALS.—Inousands might be published.

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purished a packet of your Vermin Killer last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead nince, and had only a sed part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received hy post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th.

St. J. have tried BATTLE'S VERMIN KILLER, and have found it me st iffectual in clearing my premises of LARGE QUANTITIES OF RATS.—

FEOMAB 8. CROSLAND.—Mr. Stead.

Rold in Packets. 3d., 6d., and Is. each.

Sold in Packets, 3d., 6d., and ls. each.

Mr. J. R. BATTLE, Chemist, Lincoln, England.

# Friedrichshall.

# THE WELL-KNOWN APERIENT MINERAL WATER.

"Most suitable for PROLONGED use."—Professor Seegen.

"The LONGER Friedrichshall is taken the SMALLER is the quantity necessary to effect the purpose."—Sir Henry Thompson.

"Most efficacious; to know it is to appreciate its high value."—Baron Justus von Liebig.

OF ALL CHEMISTS AND MINERAL WATER DEALERS.











31.

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# Wholesale & Export DRUGGISTS, MANUFACTURING, PHARMACEUTICAL, AND ANALYTICAL CHEMISTS.

PRICES CURRENT FORWARDED ON APPLICATION.

Special Quotations for Large Quantities or Original Packages.

Laboratories Drug Mills, Warehouses, and Head Office: 300 High Holborn. Branches: 86 New Bond Street; 7 Poultry; 153 Leadenhall Street.

NEW ACCOUNTS should be accompanied with Draft or London Reference.

300 HIGH HOLBORN, LONDON.

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# Howards & Sons

FLUID EXTRACT OF CINCHONA,

made from C. Califaya, or C. Succirubra, containing the whole alkaloidal contents of the bark.

#### QUININE, CINCHONA ALKALOIDS,

Acids, pure.

Æthers, pure & methylated.

Antimony preparations.

Benzoic Acid & Benzoates.

Bicarbonate of Soda (Howards').

Bifmuth preparations.

Borax & Boracic Acid.

Bromides of the Alkalies.

Camphor Bells, Blocks, & Flowers.

Cocaine Hydrochlorate.

Citrate of Iron & Quinine, P.B.

Citric Acid & Citrates.

Corrofive Sublimate.

Iodides of the Alkalies.

Iodoform.

Magnefia.

Mercurials, Calomel, &c., &c.

Morphia Salts.

Rochelle Salt & Pulv. Seidlitz.

Spirit preparations.

AND OTHER PHARMACEUTICAL CHEMICALS.

# Stratford, Essex.







Detailed Price Lists on application.

The Chemische Fabrik auf Actien, vormals E. Schering, Berlin,

MANUFACTURERS OF SCHERING'S

#### PARTICULARLY OF

ACID,	GALLIC	***	***	-	-
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Bi-sublimed, white, bulky
White, powder, crystallised, and dialysed
Lightest crystals
Powder and granulated
Gelatine plates
White cake and crystal
Transparent rhomboidals (facsimile of Dr. Liebreich's)
Shiny crystalline scales. (Powder form most objectionable) S.G. 1260, double distilled, bril-
liantly white, odourless; also lower S.O. and qualities
Crystals and powder of soft touch
Fine white dry regular crystals
Large and small crystals
Fine white dry regular crystals
White powder and crystals

Almost white needles ... ... ... Freely and entirely soluble in alcohol or water, ditto Dissolves colourless in water or alcohol; purest for medicine. Dissolves almost colourless in water, alcohol, and ether. Dissolves freely in water, alcohol, and ether. Purest Pyroxylin; inexplosive. See Liebreich's, below. Will not decompose by age. Free from foreign chlorides. Free from lime, chlorides, metals; will stand severest chemical tests. Purest; made by electrolysis. Absolutely purest. Perfectly free from iodide, and the most free

from chloride. Chemically pure. Apply Barytic and other tests. This will

never change colour.

Freely soluble in water and alcohol.

#### H. FINZELBERG, of Andernach-on-Rhine.

ERGOTINE, pure Dialysed ... FERRUM OXYD. (5% Dialysed)

PEPSIN PORCI (100%) ... ...

other Salicylates

Brown colloid, purified by Dialysis

Transparent brown liquid, purified by Dialysis

White, sweet, odcurless powder ...

Free from all saline matter present in the ordinary Ergotine and extracts.

Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.

Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

#### ZIMMER. of Frankfurt-on-the-Main.

Whitest and most bulky crystals ... Utmost purity warranted. QUININE, Sulphate ... ... Muriate ...

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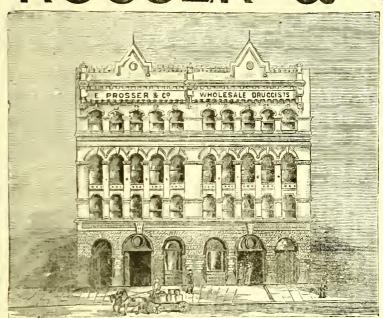
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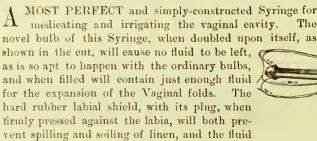
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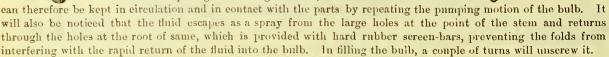
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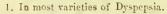


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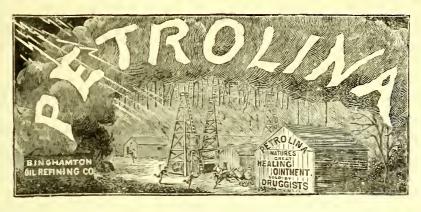
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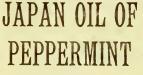
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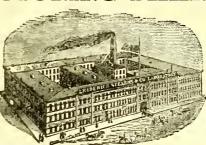




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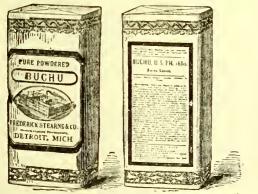
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New Catalogue No. 83—Illustrative and Descriptive Price List of Pharmaceutical Products, giving Strengths and Doses. Over 14,000 Items; 874 Illustrations. Free on Application. Correspondence solicited with Retail Druggists in all parts of the World.



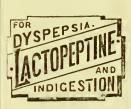
# TO CHEMISTS AND DRUGGISTS,

HOME AND FOREIGN.

PRICE LISTS and TRADE TERMS for the following PROPRIETARY ARTICLES can be had on application, enclosing Business Card, to JOHN M. RICHARDS, Depot for American Medicines, 46 Holborn Viaduct (late Great Russell Street), London, E.C.





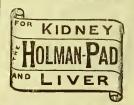




















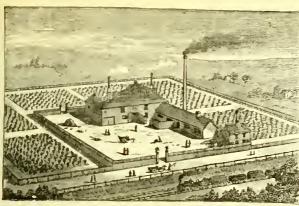




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#### MITCHAN

Peppermint, Lavender Oils, etc., Steam Distilleries, MITCHAM ROAD, NEAR WEST CROYDON, SURREY.



# JOHN JAKSON &

17 PHILPOT LANE, FENCHURCH STREET, LONDON, E.C.



Awarded SILVER MEDAL, Antwerp International Exhibition, 1885.

SILVER-GILT MEDAL, Melun General Exhibition, 1882.

GOLD MEDAL, Paris International Exhibition, 1885.

Each Bottle must bear the above Trade Mark, under which we send from our Mitcham Distilleries only PURE Peppermint, Lavender, and Camomile Oils. Each Bottle is labelled, specifying that our Oils are guaranteed PURE, and as such are INVOICED.

This soil and climate of the District of Mitcham (Surrey) are most favourable to the good culture of Peppermint, Laverder, and Camomile, and produce those qualities of Essences to much sought after by Chemists, Drugrists, &c., throughout the world.

It is beyond dispute that our Peppermint Oil is the best mannfactured, and we defy competition, which accounts for the high prices obtained.

We are the largest Growers and Distiliers of Peppermint, Lavender, and Camomile in England, and we spare no expense in obtaining the highest state of cultivation. We distill only the pure plants, the greatest care being taken to avoid weeds or heterogeneous substances.

Our Distilleries are built on the newest and most approved principles; the addition of steam power aiding us to produce the best results obtainable. Our Essences are entirely white, and, being free from resin, they will retain their strength for an indefinite period.

We are psyticularly anxious that our Trade Mark should not be confused with that of numerous so-called Distillers and others, who import inferior

with that of numerous so-called Distillers and others, who import inferior and foreign productions, all of whom represent their oils as from Mitcham.

The low price of American Mint Oils is easily accounted for by the great difference in quality. It is well known that extensive factories have been built there for the extraction of Menthol, which operation greatly diminishes the quality of these Essences.

We protest against all such products offering no guarantee to purchasers.

purchasers.
All Oils bearing our Trade Mark are guaranteed pure and genuine, Mitcham Grown and Distilled. By using our Oils, Chemists, Perfumers, Druggiets, and others can rely on the regularity of their preparations, a result bitherto impossible to ohtain, and at much less cost.

Besides which, the good Flavour and Strength of our Essences (due to the unquestionably favourable and univalled nature of the Mitcham soil) obtains for them the preference from all Peppermint Lozenge Makers, who have acquired, by the use of them, such good fame in England and throughout the world. throughout the world

Peppermint Alcohols, Dentifrices, and other liquors prepared with our Mitcham Peppermint Oil obtain great superiority, easily ascertained by a

We cannot too strongly urge purchasers, in their own interest, to huy. in preference to all others, our native and genuine products, as they offer besides every guarantee of purity, strength, flavour, and economy. Awaiting your esteemed demands,

We are, your obedient Servants,

J. JAKSON & CO.

Orders must be sent to our London Office: -17 PHILPOT LANE, FENCHURCH STREET, E.C.

#### Our Essences are put up in Bottles of $\frac{1}{4}$ , $\frac{1}{2}$ , 1, 2, and 5 lbs.

#### PRICES.

N.B.—The following quotations are only for small quantities. From 6 lbs. and upwards special arrangements can be made at reduced prices.

MITCHAM PEPPERMINT OIL, Non-Rectified. 40/ per lb. MITCHAM PEPPERMINT OIL, Rectified. 44/ , MITCHAM PEPPERMINT OIL, Pouble Rectified 47/ , MITCHAM WHITE PEPPERMINT OIL,

Double Rectified Extra

MITCHAM LAVENDER and CAMOMILE OILS, Extra

Fine (in same quantities as Peppermint), at Market Price.

#### Our Essences are packed in Boxes of-

12, 24, and 50 \(\frac{1}{4}\) or \(\frac{1}{2}\) lb. Bottles.

6, 12, 18, and 24 1-lb. 6, 12, 18, and 20 2 ib.

2, 4, 6, and 12 5-lb.

And Delivered Free to all parts of the United Kingdom.

# DUNCAN, FLOCKHART & CO.,

WHOLESALE AND EXPORT DRUGGISTS, EDINBURGH.

# CHLOROFORW

Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

M.B.—We quarantee our Chlorofo'm prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopoda.

#### CHLORIC ETHER.

SP. AMMON. AROMAT. | SP. ÆTHER. NITROS. | SYR. FERRI PHOS. CO. (PARRISH).
Fluid Extracts, Concentrated Infusions, and all Pharmacopæial Preparations.

MANUFACTURERS OF THE CELEBRATED

BLUE BLACK

WRITING INK &

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SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d, and 1s. Boxes.

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MANUFACTURING PHARMACEUTICAL CHEMISTS

WHITE HORSE BUILDINGS,

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MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS, seg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their maying PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

#### ESTABLISHED OVER 140 YEARS.



PRIZE MEDAL, PARIS, 1878.



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# BURGOYNE, BURBIDGES,

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DRUGGISTS, and

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MANUFACTURING PHARMACEUTICAL CHEMISTS,

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### PIEPIPOLIEMNIE

(REGISTERED)

#### A VALUABLE REMEDY IN CONSUMPTION AND OTHER WASTING DISEASES.

This elegant preparation is an Emulsion containing 50 per cent. of the finest Cod-Liver Oil, combined with nutritious tonics on an entirely new principle. It is rendered pulatable by the addition of Arcmatics, and is, we venture to assert, the most perfect Emulsion of Cod-Liver Oil hitherto brought before the notice of the Medical Profession and the Public. We guarantee it to keep well in any climate.

### FLUID EXTRACTS

These preparations are manufactured from the best selected Drugs, and are recommended for their uniformity and reliability.

They are so prepared that one fluid ounce of the finished Extract represents an equivalent weight of the pure drug

#### SOLE CONSIGNEES OF

Salicylic Acid and all Salicylic Salts (Kolbe's Patent).

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Antipyrin and Kairin, the new Febrifuges.

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Chanteaud's Dosimetric Medicines (Dr. Burggraeve's system).—Price List upon application.

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Chanteaud's Seidlitz, Retail 2/6; per doz. 21/, less 25 % | Malto Pepsyn (Hazen Morse's), Retail 2/9; per doz. 24/6.

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# LIQUOR SANTAL FLAV. c. BUCHU et CUBEBA

THE ORIGINAL PREPARATION.

Price (in England) 10s. 6d. per pound, packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 90-oz. Bottles.

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LIQUOR EASTONI (HEWLETT'S). SYRUP EASTONI (HEWLETT'S).

C. J. HEWLETT & SON, Manufacturing and Pharmaceutical Chemists, LONDON, E.C. ESTABLISHED 1832.

Physicians will oblige, when ordering Liq. Santal Flav. cum Buchu et Cubeba, by writing "Liquor Santal Flav. c. Buchu et Cubebâ (Hewlett's)."

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Manufacturing Chemists and Druggists' Sundriesmen.

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QUALITY GUARANTEED BY AFFIXING OUR TRADE MARK TO EVERY PACKAGE.

TRADE MARK



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FOR EXPORT ONLY.

An exhaustive illustrated Export Prices Current, comprising every requirement of the Chemist and Druggist, will be published on the 1st of January, April, July, and October, and can be had by application (post free) on receipt of trade card. The attention of the trade is especially called to their preparations, including Extracts, Concentrated Decoctions, and Infusions, for which their name is so well established, and are guaranteed to be prepared with the utmost care from the finest drugs, and which will keep in hot climates for the trade cards of the contract of the cards.

any reasonable length of time.

Manufacturers of Fruit Essences, which form a ready means when mixed with Acidulated Simple Syrup, of producing an article that has all the flavour of the freshly pressed fruit, and can thus be used with aërated water as a most refreshing drink in all hot climates.

CORRESPONDENCE IN ALL LANGUAGES.

Æthers, Alcohols, Liniments, and Tinetures shipped in bond at lowest market prices.

Patent Medicines and Proprietary Articles at special net prices. and Philosophical Instruments. Surgical Instruments.

Indents sent through Merchants should specially bear the name of Baiss Brothers & Co., and will be put on very best terms.

GOLD MEDAL, International Health Exhibition, London.

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Natural Digestive Principles

AND

SPECIAL FOODS FOR CHILDREN & INVALIDS.

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# 1. Liquor Pancreaticus (Benger)

Containing all the digestive principles of the fresh pancreas. Used to prepare pertonised or partially digested food (no apparatus beyond a jug and a saucepan required), and also medicinally as a digestive.

In 4, 8, and 16 ounce Bottles, to retail at 2s. 6d., 4s. 6d., and 8s. 6d.

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An exceedingly active Fluid Pepsine. Dose—One or two teaspoonfuls with meals.

"The Liquor Pepticus prepared by Mr. Benger is a digestive agent of extraordinary power."—Dr. Wm. Roberts, F.R.S., at Northwich Meeting of British Medical Association.

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A DELICIOUS QUICK RESTORATIVE-WILL KEEP IN ANY CLIMATE.

A concentrated partially digested and solidified beef tea, of delicate flavour. Unlike the various Extracts and Essences of Meat, it contains much of the fibrin or flesh-forming element of the beef in solution. Tins, 2s.

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For Infants, Children, and Invalids. Containing the natural digestive principles of the pancreas; when mixed with warm milk a process equivalent to partial digestion takes place, by which both the food and milk are adapted for rapid absorption.

In no other food has this result been obtained. It can therefore be taken with comfort when all others disagree.

Tins. 1s. 6d., 2s. 6d., and 5s.

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PHARMACEUTICAL CHEMISTS,

MANCHESTER.

# T. & H. SMITH & CO.,

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MORPHIÆ HYDROCHLOR.
In powder and crystals.

MORPHIÆ ACETAS
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Introduced by them and specially prepared for hypodermic treatment.

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CHLOROFORM PURE CHLOROFORM METH.

Their brand has been for many years known to the Wholesale Trade as absolutely pure.

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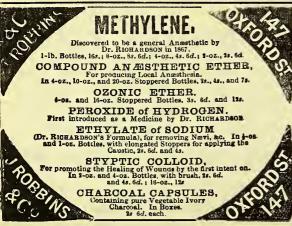
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Now largely replacing the Mitcham Oil. 21/- lt

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**SYDNEY, 1879.** 



CALCUTTA, 1884.



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# THOMAS WHIFFEN,

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Manufacturer of

# QUININE.

WHITE AND UNBLEACHED SULPHATES. ALSO BISULPHATE, MURIATE, BROMIDE, PHOSPHATE, CITRATE, SALICYLATE, VALERIANATE CRYSTALS, ETC, ETC.

# QUINIDINE, CINCHONIDINE, CINCHONINE, ETC.

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The Alkaloids of India, Cinchona Succirubra Bark, and

QUINETUM SULPHATES.

LIQUID EXTRACT OF CINCHONA, P.B. 1885,

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The Advertiser is the Proprietor and Inventor of this well-known Brand. Address for Telegrams, "WHIFFEN, LONDON."

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WHOLESALE AND

# EXPORT DRUGGISTS,

MAKERS OF

LOTIO ANTISEPTICA-A Soluble Alcoholic Solution of Coal Tar.

ACID GLYCERINE OF PEPSINE PORCI—Agreeable in Taste and Flavour, and of definite Strength.

COD LIVER OIL with Hypophosphite of Lime-An inseparable Emulsion.

AMMONIÆ MONOCARB-Very Pungent and Lasting, with a fine Aroma.

CONCENTRATED WATERS-1 to 40.

Pharmaceutical Preparations of every Description.

Original Makers of GELATINE COATED HORSE, DOG, AND OSTRICH BALLS.

EXPORT ORDERS RECEIVE CAREFUL ATTENTION.

SPECIAL QUOTATIONS TO LARGE BUYERS,

# TOWLE'S CHLORODYNE

The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13<sup>1</sup>/<sub>2</sub>d., 2s. 9d., 4s. 6d., and 11s.

We beg to inform our numerous customers, and the Trade generally, that we are WITHDRAWING THE 4-OZ. AND 10-OZ. DISPENSING sizes, and, instead, are putting up AN 11s. RETAIL SIZE. The wholesale price of the 4s. 6d. and 11s. will be at the same rate per oz. as the old 4-oz. and 10-oz. We shall still continue the undermentioned as usual.

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As originally introduced by A. I'. Towle, and free from stamp duty for dispensing. 4 oz., ½ lb., 1 lb.

Also in quantities of 6 lbs, and upwards at special quotations.

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In 1, 2, and 4 lb. bottles, and 6d. and 1s. boxes. Foil lined, and neatly got up for the counter. Quantities of 7 lbs. of Lozenges and upwards stamped with chemist's own name free of charge.

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ESTABLISHED THORNTON'S PREPARATIONS FOR THE HAIR. 50 YEARS.

THORNTON'S TOILET CREAM, 1s., 1s. 6d., and 2s. 6d. per Pot THORNTON'S LOTION AND AMBOLINE, each 2s. 6d. per Bottle.

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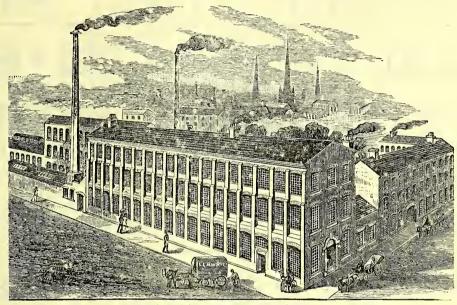
Show Cards and Bills with Name on application, with instructions for forwarding.

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ENGLAND, L.S.A.-W. F. WYLEY, F.C.S.)

And la BURY STREET, ST. LONDON, E.C. AXE,

& DRUG GRINDERS. WHOLESALE &



VIEW OF NEW PREMISES, 1884.

#### MANUFACTURERS OF CHEMICALS & PHARMACEUTICAL PREPARATIONS.

\* GELATINE COATED OVAL PILLS.

The only oval gelatine coated pills of English manufacture in the market.

\* PEARL COATED PILLS. Special and extensive list on application.

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FLUID EXTRACTS.

SUBLIMATED SERUM GAUZE.

EXTRACT HENBANE (English)

ESSENCES FOR AERATED

WATERS.

CONCENTRATED WATERS. CHINOQUININE.

CHEKAN.

We were the first importers of this drug. Our liquid Extract is the original preparation.

OLEATES.

MEDICATED ABSORBENT

WOOL (Various kinds).

EXPRESSED JUICES (English). POWDERED DRUGS.

Special attention paid to powders of guaranteed purity, which may now be had in sealed 1-lb. tins.

SCALE PREPARATIONS. HYPODERMIC ERGOTIN

TUBES.

By their use a fresh solution of Ergotin can be at any time obtained,

FRICTION CAKES (Various).
We were the first to introduce these liniments in the solid

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We are prepared to execute orders for Export, giving every attention to packing and the requirements of the Market for which goods are intended. Having direct representatives in Rio Janeiro and Valparaiso, we are in specially good position with reference

to these markets.

SPANISH PRICE LISTS PUBLISHED QUARTERLY.

We shall be happy to forward English and Spanish Price Lists, Book of Order Forms, and Pill List, to any Chemist in the World on receipt of Business Card.

25% SAVED

HERRING'S UNGUENTUM PARAFFINUM

The Cheapest and Best Gelatinous Hydrocarbon ever introduced.

Supplied in 5-lb. Tins, or Bulk.

TO BE OBTAINED WHOLESALE AT

40 ALDERSGATE STREET, LONDON.

"FOR THE BLOOD IS THE LIFE."

CLARKE'S

WORLD FAMED

BLOOD MIXTURE

The Great BLOOD PURIFIER and RESTORER.

(Registered Trade Mark—"BLOOD MIXTURE.")

The Celebrated CURE FOR Scrofula, Scurvy, Blood and Skin Diseases, and Sores of all kinds.

Wholesale of all the Wholesale Houses. Net Wholesale Price, 23/- per doz. Usual terms.

Sole Proprietors, THE LINCOLN & MIDLAND COUNTIES' DRUG COMPANY, LINCOLN.

Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.

CAUTIO N.—The Proprietors will take immediate proceedings against all persons pirating their Trade Mark, "Blood Mixture," Labels, Wrappers &c.

or Advertisements, or in any way infringing their rights.

#### IMPORTANT NOTICE.

# £200 Reward. PIRACY. £200 Reward.

The above reward will be paid by the Proprietors of "LIEBIG'S CHEMICAL, FOOD," or Wine of Phosphates, to any person or persons who shall give such information as will lead to the discovery and conviction of any one making or offering for sale spurious or forged imitations of their proprietary article.

TO OBVIATE FURTHER PIRACY, the following alterations have been made:-

The words "LIEBIG'S CHEMICAL FOOD" are now engraved on the Government Stamps, the words in water mark on the Labels, as well as being moulded on the Bottles.

The Proprietors therefore request all Chemists and Patent Medicine Vendors to RETURN for exchange ANY STOCK they may have of "LIEBIG'S CHEMICAL FOOD," or Wine of Phosphates, to either Wholesale House or direct to them,

#### 12 York Buildings, Adelphi, London, W.C.

In all our Advertisements from this date, the attention of the Public will be called to these alterations, and they will be requested only to purchase such Bottles as have the Name Engraved on the Government Stamps, and the Name in Water Mark on the Labels.

# HEARON, SQUIRE & FRANCIS,

WHOLESALE & EXPORT DRUGGISTS,

Manufacturing, Pharmaceutical, and Analytical Chemists.

ESTABLISHED

OVER

A CENTURY.



PREPARATIONS and CHEMICALS of the BRITISH PHARMACOPŒIA, 1885.

TRADE MARK.

### CONCENTRATED SOLUBLE ESSENCES OF GINGER AND LEMON.

Concentrated Essences for Cordials. Fruit Essences.

#### INFUSIONS, LIQUORS, ETC., CONCENTRATED BY EVAPORATION IN VACUO

Goods for Shipment carefully packed.

Packages at lowest rates.

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# EXT. CINCHONÆ LIQ., P.B. 1885

Certified by Dr. De Vry to contain 5 per cent. Cinchona Alka oids.
PRICE 7/- PER POUND.

The value of this preparation, originated by Dr. De Vry in 1878, has been proved in Continental practice and in the Government H sp thas of India. As manufactured by us, under Dr. De Vry's advice, it contains the prescribed percentage of Cinchena Alkaloids, together with their collateral principles, absolutely unchanged. It retains all the characteristics of the freshly-recovered percolate, and is perfectly soluble. We invite comparison, and will supply samples on application.

#### DE VRY'S CINCHONA COMPANY, 2 FISHER STREET, RED LION SQUARE, W.C.

Consulting Quinologist, Dr. J. E. DE VRY, C.I.E., K.N.L., &c., &c., The Hague.

\*\*\* Prescribers should specify "Ext. Cinchonse Liq. (DE VRY)."

# Mariazell stomach-drops.



An excellent remedy for all stomachic complaints.

Indispensable in cases of loss of appetite, weakness of the stomach, bad breath, flatulency, nausea, colie, cold in the stomach, heartburn, formation of sand and gravel, excess of mucus, jaundice, distaste, vomiting, sick-headache, spasms, constipation, over eating and drinking, worms, hypochondriasis, liver complaint and hemorrhoids.

Price per bottle, including directions for use, 1s.  $1\frac{1}{2}d$ . and 2s. 3d. Central depôt:

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Sole consignee for England:

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To be had retail of all Chemists and all Wholesale Houses in Londor,

GOLD MEDALS-DUBLIN, 1882; BOSTON, 1883; LONDON, (INTERNATIONAL EXHIBITION) 1884.

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The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.

For over 60 years in use as an excellent remedy in cases of

#### ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.

Sold by all respectable Chemists, in LARGE-SIZED Bottles (the 1s. size containing nearly Double the quantity usually sold at that price), at 1/, 2/6, and 3/6 each.

CAUTION.—Observe that the Signature of the Inventor is on every label.

# SIR JAMES MURRAY'S FILUID CANIPEOR

Is a valuable remedy in cases of SLEEPLESSNESS and WEAK NERVES. Bottles, 1/ and 2/ each.

SIR JAMES MURRAY & SON, Chemical Works, Temple Street, Dublin. BARCLAY & SONS, 95 Farringdon Street, London.

# SULPHUR TABLETS.

TITLE AND TRADE-MARK REGISTERED.

WITH a view of still further popularising Sulphur Tablets we invite the co-operation of Chemists throughout the United Kingdom.

SULPHUR TABLETS are sold at One Penny each, also in family packets at 1/-, leaving the retailer a clear profit of 50 per cent.

SULPHUR TABLETS will keep any length of time without spoiling.

SULPHUR TABLETS will sell readily and recommend themselves when once introduced.

SULPHUR TABLETS should be kept in every household, as a handy and simple Medicine, which Children will take readily.

SULPHUR TABLETS are composed of Sulphur, Cream of Tartar, and other harmless ingredients of repute for their purifying qualities.

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CARDS AND APPLICATION.

#### Dr. J. COLLIS **BROWNE'S**

THE ORIGINAL AND ONLY GENUINE.

#### IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD, and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the

Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepre-

sentation of the decision of Vice-Chancellor Wood.

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant

publishes the said testimonial as referring to his medicine.

The Editor of the Medical Times, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyns referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published

by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the

inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.



ONLY GENUINE

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#### FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:-

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Bristol
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Frazer & Green,	Glasgow
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After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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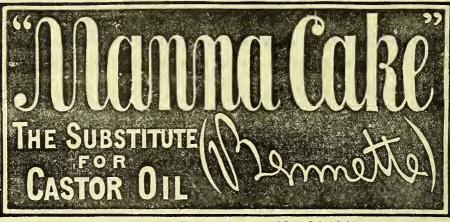
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	NOI	N-OFFICIAL FORMULÆ.
	Per Gross.	Per Gross. s. d. Pil Phosahori et Nucis Vom. s. d.
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	" Jalapæ, Pulv. Colocynth " Sapo Cast., Gingerine, Theriacæ	Ext. Coloc. Co., Pil. Hydrarg, Ext.  Hyoscyami  Ext. Colchici gr. ½ in each Pill.  E 112 Pll. COPAIBÆ Co. grs. 4 and 5 2 0  E 126 Phosphorus gr. ½ Ext. Nucis  Vom. gr. 4  E 125 Phosphorus gr. ½ Ext. Nucis  Vom. gr. 4  E 126 Phosphorus gr. ½ Ext. Nucis  Z 6
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	" Hyoscyami Pil. Hydrag., grs. 2 in each Pill.	Pil. Hydrarg., grs. 2. Ferri Redact. gr. 3, Ext. Nuc. Vom. gr. 4
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:	E 106 PIL, CALOMEL SIMP.	E 119 Phosphorus, gr. 1, Ferri Redact. , Gum Ammon. gr. 1, Pulvi Sapo Alb. gr. 1
	Calomel, grs. 1 and grs. 2 1 0 , grs. 3, 4, and 5 1 2 PIL CALOMEL C. OPIO.	PIL. PHOSPHORI et QUINI.E. E 135 PIL TUSSI C. OPIO 1 4 Pil. Tussi (as above), gr. 4
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	E 108 " 2 " 1 ) 1 0	PIL PHOSPHORI C. FERRO et OUINIA. E 138 PIL POTASS PERMANG
	E 110 , 4. , 1	E 122 Phosphorus gr. $\frac{1}{20}$ , Ferri Redact. gr. 2 Quiniæ Sulph. gr. $\frac{1}{2}$ 2 6 E 123 Phosphorus gr. $\frac{1}{20}$ ; Ferri Redact. E 141 Pil. CALCH SULPHID. gr. $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{1}{1}$ 0
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		UNCOATED PILLS.
		Per Lb. NON-OFFICIAL FORMULE.—The numbers refer to the formula
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	4 , , Myrrhe	12 0 20 Pil. Aperiens
	7 " Cambogiæ Co	5 6 22 ", Mit 6 0
	8a ,, (c. Seam. Virg.)	
	9a " (c. Scam. Virg.) 14 "Hyd. Subchlor. Co	
	17 The Competition	6 0 E 113 , Digestive, vel Pil. Prandif
1	19 ", Rhei Co	6 0 E 133 ", Tonic
	ROLLING AND	COATING PILLS according to Private Formulae.
1	Weight	5 and 4 Grains. 3 and 2 Grains. 1 Grain.
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1	Damson	 	 	 			,,	6/			Prune			 	 	 	19	6/		
1	Gooseberry	 	 	 			99	6/			Quince			 	 	 	12	5/6		
1	Grape	 	 	 			99	6/		- 1	Raspberry			 	 	 	,,	4/	2	3/8
1	Greengage	 	 	 			"	6/			Red Curraut			 	 	 	,,	5/		
1	Nectarine	 	 	 			,,	6/6			Ribston Pippin	(apple	9)	 	 	 	,,	5/		
1	Peach	 	 	 		٠.	"	7/	4/6	6 1	Strawberry			 	 	 	,,	4/		

#### FROTHINE (EVANS').

For producing an instantaneous and permanent Creamy Froth upon all kinds of Beverages.

Directions—To Ale, Beer, Porter, Cider, Ginger Ale, &c., add one ounce of the Frothine to every ten gallons. To Syrups for Lemonade and other Aërated Waters, add half an ounce to each gallon.

2/6 per lb. Special Discount for quantity.

#### GRANULAR PREPARATIONS (EVANS').

Having special plant for the manufacture of these, we can offer very advantageously.

I	Bismuth Ammonia	Citr	ate						3/	7 lb. 2/8	Lithii Carbonas				.,				6/	7 16.	5/6
ļ	Caffein Citrate		••.						5/	,, 4/6	, Citratis					+ 4			6/	٠,,	5/6
ı	Town Conhance	• •	• •	••	• •	• •	• •	• •	28	,, 2/4	Potassii Citras	• •	• •	••	* 1	• •		••	3/	. ,,	2/8
l	City Li	• •	**.	• •	• •	• •	••	• •	2.0	" 2/4 " 2/	Quininæ et Ferr	Citro	rio	• •		• •	• •	••	6/	31	5/6
l	Todidi	• •	• • • • • • • • • • • • • • • • • • • •				• •	• • •	3/6		Seidlitz	Citta						• • •	1/8	"	1/6
١	Tomon Fall								1/4	56 , 1/2	Vichy									12	2/0
1								-													

#### MAGNES. CITRAS. GRAN.

No. 1 (SPECIALLY FINE QUALITY), 1	and 2 lb.	Bottleș,	1/6 lb.	4 lb. Bo	ttles and Po	ttles, $1/5$ 28 lbs.	Tins, $1/4$ lb	),		
No. 2 (GOOD MERCHANTABLE)	,,	,,	1/2 ,,	,,	,,	1/1 ,,	,, 1/ ,,			
No. 3 (FAIR QUALITY)	,,	,,	1/ ,,	,,	,,	/11 ,,	"/10 "			
Special quotations to large buyers.										

#### OLEATES (EVANS').

True Precipitated (Shoemaker's Process).

These precipitated Oleates are true chemical compounds of the metals, prepared by double decomposition. We supply the pure normal Oleates, so that ointments may be made of any strength; also Powders for dusting over the skin, which are generally used of the strength of twenty per cent. of the Oleate, in a suitable base, and for this we use starch. We also supply ointments prepared with benzoated lard. Fossiline may also be used.

NORMAL OLEATES (true).	UNGUENTA.	PULVERES.
Aluminii Oleas 4/ 1b.	Aluminii Oleatis	Aluminii Oleat 20 % 2/ 1b.
Arsenici " 8/ "	Arsenici ,, 5 ,, 4/ ,,	Arsenici ,, 5 ,, 4/. ,,
Argenti ,, 4/ oz.	Argenti " 20 " 12/ "	Argenti "
Distriction ,	Bismuthi ,, 3 6 ,,	Bismuthi ,, 3/6 ,,
Cupri "	Cupri ,, 2/ ,,	Cupri .,
Ferri ,, 4/ "	Ferri ,, 2/ ,,	Ferri ,
Hydrargyri "	Hydrargyri ,,	Hydrargyri,, 20 ., 4/ ,,
Total tet	" " 20 " 4/ "	Nickeli ,, 4/ ,, Plumbi ., 2/ ,,
Stanni "	This is recommended of 50% for inunction.)	Stanni 20 " A/
Zinci "	Mielroli Olootis 20 0/ 4/ 1b	Wind " 20 " 21 "
(This is in a powder.)	Dismbi 20 2/	,,
(and is in a politicity).	Stonni " 20 " 1/	
	Zinci "	

#### SOLUTIONS OF OLEATES (Marshall's Process).

These are prepared according to Professor John Marshall's plan, by dissolving the metallic oxides and alkaloids in medicinal Oleic Acid. They are Oleates dissolved in an excess of Oleic Acid, and are the ones known before Dr. Shoemaker' process was introduced. We make them of the following strengths of the oxide or alkaloid:—

								_	_											
Aconitinæ Ol	eas		2 %		12/ oz.	1	Hydrargyri Ole	as 5	% Mo	rph 2	% 1.0/	1b,			Oleas			29	% 4/	11
Atropinæ	,,	••	2 "	• •	1/		,	,20	),, "	5	,, 14	,,	V.erat	riæ				2,	, 5/	12
Bismuthi Hydrargyri	,,	••	35 2,,	••	5 lb.		Morphine .	,	* ••	.,,5		,,	mi	01:		has also		used)	0/	
	" EP	. 1885	5 ,,	••	3,0 ,,		Quinine ,	,	• • •	20		22 * *	Zinei		20	B.P. 188	55	••	3/	"
"	,,	• 1000	20 .,		4/6 "	1	(5% and	25% ha	ve also	been use		"	(11	***	20,,		~ •			23

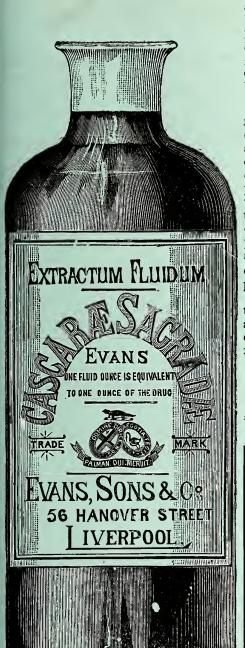
#### OL. RICINI SINE SAPORE (EVANS').

We have now ample supplies, and in answer to numerous inquiries may state that this is quite a special article, which we are the SOLE importers, and that we have also the ordinary ITALIAN CASTOR OIL (decorticated), which frequently sold as "TASTELESS."

## EVANS, SONS & CO., EVANS, LESCHER & WEBE

Canada: EVANS, SONS & MASON (Limited), Montreal and Toronto.

# EVANS' FLUID EXTRACTS



"Decoctions, infusions, vinegars, and wines have almost gone out of use, while tinctures and syrups are steadily falling into disuse, though not as rapidly as they deserve. These are all replaced by the far more accurate and convenient fluid extracts with their small and effective doses, which can be so easily

administered in so many different ways. Thus the physician and pharmacist, instead of having to keep two or three preparations of the same drug to get stale on his shelves, has to keep only one, and this the best and most accurate one." "Modern Progress in Materia Medica."— N. Y. Medical Association.—E. R. SQUIRE, M.D.—Nov. 18th, 1884.

EVANS' FLUID EXTRACTS, at first made by us in Canada (some from the fresh plants), according to the U.S. Pharmacopœia, are now perfected in our own laboratories. They are prepared by elaborate processes, with the menstruum most suited to each individual drug; in odour and taste they well represent the crude drug, and in strength they contain the whole of the active medicinal properties.

Infusions, decoctions, tinctures, wines, and syrups can be at once obtained from these fluid extracts, by simply mixing one minim for every grain of the

McDade's Compound Berber. Aquifol. Cascar. Sagrad. Coca Convall. Maj.

Damiana Eucalyptus Euonymus Gelsemium Grindelia Robust. Guarana

drug ordered. This is perhaps the most perfect method of making such preparations of an accurate strength.

They are put up in actinic glass bottles, of 5, 10, and 20 fluid ounces, capsuled, with a large gold front label; a special feature, to assist in dispensing, is the back label, containing full scientific names, botanical origin, description, medical properties, dose, strength. active ingredients, &c.

Complete lists of over 100 kinds, with prices, free on application; amongst them may be mentioned—

> Hamamelis Jaborandi Piscid, Eryth. Rheum Viburn. Prunif.

#### SPECIMENS OF BACK LABELS.

#### CASCARA SAGRADA.

Rhamnus Purshiana: growing in California. N. O. Rhamnaceæ.

This plant is a powerful tonic, laxative, preferably in small doses extending over some time. The bark is in largish pieces, rather flat and thin, breaking short; pale yellowish brown, with adhernt brown outer bark, and dark fibrous inner layer; little odour, and nauseous taste; when the outer layer is corrugated and thickened, the bark is not so valuable. The fluid extract represents measure for weight, one minim being about equal to one grain of the powdered bark.

Dose...3 to 15 drops as a laxative; 20 to 50 drops as a purgative.

### COCA.

Erythroxylon Coca. S. America. N. O. Erythroxylaceæ.

The leaves are oval lance-olate, slightly coriaceous, green. Lot brown, wth pleasant odour resembling tea: they should possess the characteristic line run-ning up the leaf on either side of the midrib. Cocaine, in colourless crystals, is the active alkaloid.

Coca stimulates the whole nervous system, as a tonic restorative.

Dose of fluid extract, 30 to 100 minims.

Strength of fluid extract: one fluid ounce is equivalent to one ounce of the leaves.

### STILLINGIA COMP.

STILLINGIA COMP.

The following five herhs have been used as antisyphilities by the North American Indians.

This compround is prepared according to the formula used by Dr. MP and and Dr. Marion · im:; it is a mixture of the fluid extracts of Stillingia sylvatica.

Queen's root

Smilax Sarsapailia,

Bamboo brier

Artium Lappa, Burdook

Phytolacca decandra.

Artium Carolinian Artium Carolinian Artium Carolinian Artium Lappa, Burdook

Anthoxylum Carolinian Artium Carolinian Artium Lappa, Burdook

A powerful alterative.

Dose of these compound fluid extracts, one fluid dextracts, one fluid drachm in water, thrice a day, gradually increased up to doses of ½ fluid ounce. Security alterative cach of the roots of Stillingia, Bamboo Brier, Burdook and Poke Root, and the bark of the Prickly Ash.

EVANS, SONS & CO., 56 HANOVER STREET, LIVERPOOL.

EVANS, LESCHER & WEBB. 60 BARTHOLOMEW CLOSE, LONDON.

EVANS, SONS & MASON (LIMITED), MONTREAL AND TORONTO.



WE beg to call the attention of the Trade to our HYDROCARBON JELLY, manufactured only by us, and the deroand for which being so largely on the increase is in itself an evidence of its superior quality. Owing 10 the much larger scale on which we are now enabled to manufacture this article, we can quote a considerable reduction in price—as under; thus rendering it as cheap as any other basis for Ointments, Pomades, &c., to which it is much superior, as it CANNOT BECOME RANCID. It is also in itself a simple dressing for wounds, bruises, &c., &c.

WHITE FOSSILINE.—In 1, 7, 14, and 28 lb. Tins. 1/-: 56 and 112 lb. Drums, -/11.

YELLOW FOSSILINE. - In 1, 7, 14, and 28 lb. Tins, 8d.; 56 and 112 lb. Drums, 7d.

N.B.—Both answer tests of Parrafinum Molle B. Ph. 1885.

#### LARGE SPECIAL DISCOUNT TO BUYERS.

**SIMPLE.**—6d. Bottles, 4/- per doz.; 1/- Bottles, 7/6 per doz. FOSSILINE

**POMADE.**—6d. (retail), 3/9 per doz.; 1/- (retail), 7/6 per doz.

WHITE.—1/- Bottles, 8/- per doz.

PLASTERS.— Soft unglazed Calico. Holland. Flesh-coloured Cambric.

CORN PLASTERS.—In 6d. and 1/- Boxes, 3/6 and 7/- per doz.

In 3 gross glass-top Boxes, 3/6 per gross.

MANUFACTURERS.

LIVERPOOL:

LONDON:

EVANS, SONS & CO. EVANS, LESCHER & WEBB

**CANADA:** 

EVANS, SONS & MASON (LIMITED),

Montreal and Toronto.

ple

#### SUPPLEMENT

## SAVARESSE'S CAPSULES (ORGANIQUES).

This is another medium for the administration of PURE Drugs in KNOWN quantities.

#### HISTORY.

Organic Capsules were invented by Mr. Savaresse, a physician, of Paris, who found that ordinary gelatine capsules though tasteless, are made of a substance easily dissolved by the warm juices of the stomach. The medicine thus set free in a short time produces nausea, eructations, and a repugnance to the continuation of the treatment. After experiments upon several animal substances, Mr. Savaresse remedied this objection of a too easy digestion by using an organic envelope of two separate but adhering layers, so prepared as to resist the digestive powers of the gastric juice. These Capsules are not a new or secret remedy, they are simply a vehicle for the more sure administration of such drugs as Copaiba, the Essential Oils of Cubebs, Copaiba, and Yellow Sandal Wood, Turpentine, Oil of Male Fern, &c.

#### ADVANTAGES.

The Capsule of Mr. Savaresse softens in the stomach, and there commences digestion without the contents being set free, the complete digestion and breaking up of the Capsule rarely taking place before it has reached the intestine.

For Full List and Prices see our Lists.

## SAVARS CUBEB CIGARETTE

These Cigarettes are composed mainly of Cubebs, recently ground and of sound quality, with definite and well-judged proportions of Stramonium and Cannabis Indica.

#### OFFICINALIS. CUBEBA

Extensively inhaled in America for catarrh, cold in the head, hay fever, and influenza. The efficacy resides in the resins, and not in the essential oil of the Cubeb; it is these that produce a stimulant effect upon the mucous membrane. One is to be used occasionally, especially before the first sleep, in asthma.

In Boxes of 12 and 24 Cigarettes, 9/- and 24/- per doz.

## SALINE—EFFERVESCING.

The peculiarity of this Saline is, that the Chlorate of Potash, in the proportion of 19 per cent, is in a state of minute subdivision, with, at the same time, a slight excess of Tartaric Acid.

1/6 per lb. Special quotations to large buyers.

## ELIXIR OF CASCARA SAGRADA (RHAMNUS PURSHIANA)

(HAWLEY'S).

This Californian plant has a great reputation in America. The laxative action of the Fluid Extract made by us seems most beneficial in chronic constipation, especially arising from indigestion; it acts especially as a tonic in exciting to better action the liver, stomach, and intestines.

## TINCT. AS WARBURGS (EVANS').

There is no doubt but that cures have been effected in India with this remedy where Quinine by itself has failed. This Tincture is made by EVANS, LESCHER & WEBB, according to the form given by Dr. Warburg to Dr. MacLean, and is guaranteed to contain the 53 ingredients, some scarce and difficult to obtain.

#### STRENGTH.

One ounce contains about 8 grains of Quinine.

## HAWLEY'S COUNTER ADJUNCTS.

ORNAMENTAL AND USEFUL.

A selection of reliable preparations, with artistic labels, bearing Chemist's Name and Address.

For Prices in bulk see Drug List. Full lists, with notes on new "Materia Medica," free on application.

## EVANS, LESCHER & WEBB, LONDON. LIVERPOOL:

CANADA:

EVANS, SONS & CO. EVANS, SONS & MASON (LIMITED),

Montreal and Toronto.



# MONTSERRAT."



# PURE LIME-FRUIT JUICE LIME-FRUIT JUICE CORDIALS.

The sale of the above has been so steadily on the increase that within 12 months over

## 180,000 GALLONS WERE IMPORTED!

Nothing shows more conclusively than the above fact the superiority of the "MONTSERRAT" LIME-FRUIT JUICE over the many spurious imitations offered under the name of Lime Juice or Lime Juice Cordials.

It is now to be found in the Stock of nearly every Chemist throughout the World. N.B. !-In "Montserrat" alone is the Lime Tree cultivated on a large scale for the production of a Pure Lime-Fruit Juice.

The following Medals have been obtained:-

MEDAL, First Order, Melbourne, 1880.

ONLY MEDAL, International Food Exhibition, London, GOLD MEDAL, Canadian Exhibition, 1882.

SILVER & ONLY MEDAL, International Food Exhibition, London, 1881.

GOLD MEDAL, Adelaide Exhibition, 1881.

SILVER MEDAL, International Temperance Exhibition, 1881.

MEDAL, New Zealand Exhibition, 1882.

THE SPECIAL GOLD MEDAL, Dominion Exhibition, Canada, 1883.

Also a SPECIAL DIPLOMA, International Exhibition, Crystal Palace, 1884.

GOLD MEDAL, Calcutta Exhibition, 1884.

THREE BRONZE MEDALS, Toronto Exhibition, 1884.

## Sole Consignees—EVANS, SONS & CO., LIVERPOOL.

LONDON: EYANS, LESCHER & WEBB.

CANADA: EYANS, SONS & MASON (Limited),

Montreal and Toronto.

UNITED STATES: WRIGHT & RICH, New York, Boston, Baltimore, and Chicago.

AUSTRALASIAN AGENCY—W. J. WATKINS, Wynyard Lane, Sydney, N.S.W.

NEW BREAKFAST AND AFTER-DINNER BEVERAGE.

(Pure Coffee Combined with Malt by Patent Process). DIGESTION.

'As a Breakfast Beverage it is unsurpassed." - Dr. Sanderson, M.R.C.S. | "A nourishing and health-producing article of diet." - E. Davies, F.C.S., &c

MALT COFFEE WORKS, 34 FLEET STREET, LIVERPOOL.

Sole Proprietors—EVANS, SONS & CO., LIVERPOOL.

# DRUGGISTS' SUNDRIES IMPORTANT NOTICE.

November 14th, 1885.

The undersigned have much pleasure in calling the attention of the Trade and Shippers to the New Edition of their ILLUSTRATED DRUGGISTS' SUNDRIES LIST, which has been carefully revised to date and numerous additions made, and attention is drawn to advertisements of specialities in the following seven pages.

This List will be found most complete, and so arranged as to be easily referred to. It will be forwarded free to any Registered Chemist and Druggist on receipt of Business Card.

N.B.—The word SAVARS has been adopted and duly registered by the Proprietors as a Trade Mark on every description of Druggists' Sundries supplied by them to the Registered Chemists and Druggists only.

Sole Proprietors-

EVANS, SONS & CO., LIVERPOOL.

LONDON:

CANADA:

EVANS, LESCHER & WEBB.

EVANS, SONS & MASON (LIMITED),
Montreal and Toronto.





# SPECIAL NOTICE TO THE TRAD

The word SAVARS has been adopted and duly registered by the Proprietors as a Trade Mark on every description of Druggists' Sundries supplied by them to the Registered Chemists and Druggists only.

The Goods will be found of unsurpassed quality, and at most reasonable prices.

- SAVARS HOUSEHOLD REQUISITES.—Brunswick Black, Carbolic Soap, Feeding Bottles, Breast Exhausters, Furniture Polish, Marking Ink, Knife Polish, &c. All labelled and got up in a superior style to those usually offered.
- SAVARS MEDICAL REQUISITES.—Cotton Wool, Chest Protectors, Ear Syringes, Camphor Rolls, Enemas, Corn Plasters, Plasters-Marginal, Tonic, and Porous; Fossiline Plasters, Gutta-Percha Tissue, Oil Silk, Trusses, &c. All of first-class quality and finish.
- SAVARS TOILET REQUISITES.—Bear's Grease, Brilliantine, Cold Cream,

Eau de Cologne, Floral Bloom, Lime Cream, Pomades, Perfumes, "May Blossom" Toilet Requisites, Floral Pomades, Glycerine Jelly, Lavender Water, Shaving Cream, Tooth Paste, Violet Powder, Fuller's Earth, Fossiline Pomades, &c.

Will be found of superior quality and finish to any offered.

SOLE PROPRIETORS,

& CO., LIV

EVANS, LESCHER & WEBB.

EVANS, SONS & MASON (LIMITED),

Montreal and Toronto.

N.B.-A Complete Illustrated Price Current of Druggists' Sundries, Proprietary Articles, Patent Medicines, &c., issued every Six months and supplied on application and receipt of Business Card.







# FEEDING BOTTLES TRADE L MA



SAVARS Feeding Bottles have now been before the Trade for some years, and are guaranteed to be equal in value to any offering.

The Indiarubber is of the finest quality, and every care taken in the fittings, &c.

For Complete Description, see Druggists' Sundries List, Pages 29 and 30.

For Prices, see Page 15, Druggists' Sundries List.

For Prices, see Page 15, Druggists' Sundries List.

N.B.—Carriage paid on Orders amounting to £5 and upwards. SPECIAL QUOTATIONS TO BUYERS OF QUANTITY.

WE ALSO OFFER

## "POPULAR."

In 3-dozen Boxes.

Black Fittings, 32s. gross; White Fittings, 30s. gross.

## CORNUCOPIA" (SCREW).

In 3-doz. Boxes.

Black Fittings, 44s. gross; White Fittings, 42s. gross.

## EVANS, SONS & CO., EVANS, LESCHER & WEBB,

LIVERPOOL.

LONDON.

CANADA:

EVANS, SONS & MASON (LIMITED), Montreal and Toronto.

# T PROTECTORS

The very finest Felt, and coloured with Cochineal only.

Please note sizes at foot.

	SINGLE, DOUBLE, AND VEST SHAPE.	
	No 0 1 2 3 4 5	
a.	Savars Chamois Leather & Flannel,	
	,, ,, single 6/- 7/- 11/6 13/6 16/- 20/- per doz. ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	
	,, ,, double 20/- 20/- 26/- 32/- 39/- 48/- ,,	
ঠ.	Savars Felt, Scarlet & White assorted,	
	", Fig. 1 single 5/- 7/6 10/6 13/6 18/- 20/- ", Glass-top Boxes, containing \( \frac{1}{4} \) doz. each No. 1, 2, \( \) \\ 3, & 4 Felt Chest Protectors \( \) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	
d.	Glass-top Boxes, containing \( \frac{1}{4} \) doz. each No. 1, \( \hat{2}, \hat{1} \)	
	3, & 4 Felt Chest Protectors	
e.	Savars Felt, Scarlet & White assorted,	
	,, ,, ,, double 13/- 17/- 23/- 29/- 34/- 45/- per doz.	
	Fig. 2, Covering Chest and Back.	
f.	Glass-top Boxes, containing ½ doz, each No. 1, 2, 1	
	Glass-top Boxes, containing \( \frac{1}{4} \) doz. each No. 1, 2, \\ 3, & 4 \) Double Chest Protectors \qquad  \qquad \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad  \qquad \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqq \qqqq \qqqq \qqqq \qqqq \qqqq \qqqq \qqqq \qqqq	
ff.	Savars "GOOD SAMARITAN," Vest-Shape, No. 1 2 3 4 5 6	
	covering Chest and Back, Fig. 3 f 19/- 23/- 29/- 34/- 45/- 52/- per doz.	
fff.	Glass-top Boxes, containing 1 doz, each No. 1, 2, 1	
	3, 4 "GOOD SAMARITAN" Protector	







Fig. 2.



Fig. 3.

The Sizes of Savars Single Protectors are-No.  $0-7\frac{1}{2}\times6\frac{1}{2}$ ; No.  $1-9\frac{1}{2}\times8$ ; No.  $2-10\frac{1}{2}\times9\frac{1}{2}$ ; No.  $3-12\times11$ ; No.  $4-14\times12$ ; No.  $5-15\times13\frac{1}{2}$ .

The Sizes of Savars Double Protectors are-

No. 1  $16\times12\tfrac{1}{2}$ 17 × 14  $10\frac{1}{3} \times 8\frac{1}{3}$  $13\frac{1}{2} \times 10\frac{1}{2}$  $12 \times 9$ 

Double, and Good Samaritan Vest cover Chest and Lungs. Single, cover Chest only.

The Felt Protectors are manufactured from the purest Lambswool, purified without the aid of Chemicals, and are coloured with Cochineal only.

g. Savars HARE-SKIN (English) ... ... 22/6, 25/-, and 30/- per doz.

### PUFF BOXES:

We have a splendid assortment of all descriptions, and call particular attention to the Applewood, which are excellent value. We have also some beautiful designs in China, &c., suitable for Christman Presents, &c.

#### **BOXES:**

We can quote for any description of Cardboard Box, and call attention to the quotations in our Druggists' Sundries List of Seidlitz Powder Boxes.

EVANS, SONS & CO., EVANS, LESCHER &

Canada: EVANS, SONS & MASON (Limited), Montreal and Toronto.

# A NOVELTY IN PLASTERS!



POROUS



# ASTEKS U

The Proprietors have much pleasure in calling the attention of the Trade to the above, which possess the following advantages, and are sure to command a large sale:—

They Soil the Clothing less than any other Plaister—an important point in the case of Belladonna.

They are more comfortable to wear, are more slightly, and adhere as well as any Plaster.

They are Porous-hence ventilating, and being of red felt are at the same time exceptionally warm.

They are as pliable as Leather, yet cannot wrinkle, which is so often the cause of disagreeable itchiness.

They are as cheap as Leather Plasters.

ARE SUPPLIED AS FOLLOWS, EITHER HEART OR LONG SHAPE:-

Size No. 2 3/9 5/8 doz.) HEART OR 2/6 Roborans and Strengthening ... 1/10 LONG SHAPE.

3/9 5/8 7/6 ,, Belladonna and Capsicum ..... 2/6 SAMPLES CAN BE HAD ON APPLICATION. USUAL DISCOUNT.

QUOTATIONS TO LARGE BUYERS. SPECIAL

SOLE PROPRIETORS:

EVANS. SONS LIVERPOOL. & CO.,

LONDON:

CANADA EVANS, LESCHER & WEBB. EVANS, SONS & MASON (Limited)

Montreal and Toronto.

# NOVELTY IN PLAS



# PLASTERS.



In addition to those on Felt, we can supply all descriptions Marginal on Leather, Plain or Porous. The quality is equal to any sold and prices lower.

#### PLASTERS (MARGINAL OR POROUS MARGINAL).

On Leather.	Retail Price.	Balsamic.	Calefaciens.	Roborans.	No.	Retail Price.	Belladonna, Capsicum, or Opium.
Heart Shape	. 1d. . 1½d. . 2d. . 3d. . 4d.	Per Doz. s. d. 0 7 0 11 1 3 1 10 2 6 3 9	Per Doz. s. d. 0 7 0 11 1 3 1 10 2 6 3 9	Per Doz. s. d. 0 7 0 11 1 3 1 10 2 6 3 9	2 3 4 -6	3d. 4d. 6d. — 8d.	Per Doz. s. d.  2 0 2 10 3 9 5 8
Long Shape	. 2d. . 3d. . 4d.	0 7 1 3 1 10 2 6 3 9 5 8	0 7 1 3 1 10 2 6 3 9 5 8	0 7 1 3 1 10 2 6 3 9 5 8	2 3 4 6 8	3d, 4d. 6d. 8d. 1/-	1 10 2 10 3 9 5 8 7 6
Oval Shape ,	3 <i>d</i> . 4 <i>d</i> . 6 <i>d</i> . 8 <i>d</i> .	1 3 1 10 2 6 3 9 5 8 	1 3 1 10 2 6 3 9 5 8	1 3 1 10 2 6 3 9 5 8	2 3 4 -6 8	3d. $4d.$ $6d.$ $8d.$ $1/-$	1 10 2 10 3 9 - 5 8 7 6
Saddle Shape	0.1	3 9 5 8	3 9 5 8	3 9 5 8	_	8 <i>d</i> . 1/-	5 8 7 6
Breast Shape	. 4d. . 6d.	Emp Plur	nhi 3 0	doz.	_	6d. 8d.	Belladonna 3 9 or Opium 5 5 8

THROAT PLASTERS, 1d.; Balsamic, 7d. per doz. THROAT PLASTERS, 2d.; Belladonna, 1/3 per doz.

Note.—We can also supply Belladonna Plaster spread to order in the following sizes, exclusive of margin,  $3\frac{1}{2} \times 3\frac{1}{2}$ ,  $6 \times 6$ ,  $7\frac{1}{4} \times 7\frac{1}{4}$ ,  $8 \times 4$  inches 4;- 6;-, 4;- per doz.

These sizes are frequently required in dispensing.

### PLASTERS, TONIC (ON SWANSDOWN).

HEART SHAPE			•	4	•	2		4	5	
					5/8	8/-				r gross.
LONG SHAPE SADDLE SHAPE	•••		•••	***	7/3	11/-	13/9	,	21/6	28/6 per gross.
SADDLE SHAPE		***	• • • •		* • • •		•••	***		Tolo ber gross.

#### PLASTERS (POOR MAN'S).

No.	1. On Cloth,	Savars				•••	15/3 per gross. No. 1a. On Paper, 6/8 per gross
٠,,	2. Porous	,,	 •••	•••		•••	3d. retail (in boxes, containing 2 dozen), 2 - per dozen
,,	2a. ,, on Pa	per ,,	 	•••	•••		2d. ", ( ", ", ") 15/- per gross 27/- per gross. No. 3a. On Paper, 14/-per gross
: 2	3. On Cloth, ST	ERRY'S	 •••	•••		•••	27/- per gross. No. 3a. On Paper, 14/-per gross.

## EVANS, SONS & CO., EVANS, LESCHER & WEBB,

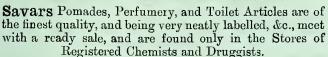
LIVERPOOL.

LONDON.

Canada: EVANS, SONS & MASON (Limited), Montreal and Toronto.

SUPPLEMENT

PONADES, PERFUN
TOILET ARTICLES, &
Savars Pomades, Perfumery, and Toilet Art





и	_				. 1			-		<b>N</b> 4	,
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		_	ı a		$\sim$	,	A I	_	1 B	-	

					PEKF	U	IVIEK	Υ.								
1.	Savars	SUPERIOR	PERFUME, fo	or E	Iandkerchie	f ()	Flat Bot	tles)		•••		•••	ogn (		3/9 r	er doz.
2. 3.	"	,,	,,		,,	À	Round ,	, ).					200		76	,,
3.	"	,,	,,		,,	(a	s No. 2			rinkler	s		es	٠ ر	8/6	,,
4.	,,	"	,,		"		ancy Cui						l e e	He	18'-	,,
5.	,,	,,	,,		,,		"						fu o	ns	28/-	,,
6.	,,	,,	,,		,,		"		,,	,,		•••	perfume assorted	je	16 -	,,
4. 5. 6. 7. 8. 9.	"	"	"		,,		12		,	"				۵	20) -	٠,
8.	"	,,	,,,		,,	in	Cases (				latine	Case)	ese	•••	50 -	,,
9.	,,	,,	**		,,	(2	Bottles	in F	oldi	ng Cas	ket)		ا ج ز		42/-	,,
10.			ies, for the I	Iand		`			6d.	retai	1	•••			3/4	٠,
11.	Savars	LAVENDE	R WATER						6d.	,,					3/9	,,
12.	,,	,,	,,						1/-	,,					76	,,
13.	,,	,,	,,				•••		2/-	,,		••			14/-	. ,,
<b>1</b> 4.	,,	,,	,,					•••	36	,,	•••	•••		•••	28/-	,,
15.	,,	EAU DE C	COLOGNĘ						1/-	,,		.,.	•••	• • •	7/6	**
16.	,,	,	, ,		•••				2/-	,,	•••	•••			15/-	**
17.	,,	Extra-qual	ity Perfume	, in	Stoppered	Ova	l Bottle		1/6	retai	l				13/-	,,
17a	,,,	,,	,,	in	White Glas			vith								
					Cut St	opp	er	•••	1/9	,,	•••	•••	•••	• • •	14/-	17
176		,,	,,	,	,,	,	•••	•••	2/6	,,	•••	•••	•••	•••	20/-	• ,,
17c		,,	,,		,, ,	,	• • •		5/-	,,	•••	•••	•••	•••	44/-	17
18.	,,	,,	in Hands	ome	Cut Bottle	, in	Decora	ted I	edes	tal_Cas	se		•••	• • •	48/-	,,
19.	,,	,,			handsome C			n imi	itatio	n Moro	eco C	abinet	•••	•••	847 -	,,
20.	"	"MAY BLO	ossom" Perf	UME						•••	•••	•••	•••	•••	8/-	"
21.	,,	<b>,</b> ,	,,,		$\frac{\ln 1}{-bot}$					•••	•••	•••	7/0	4 - 23	9/-	"
22.	"		R WATER, in 3								•••	•••	1/6 re	etair	; 11/3	,,
23.	,,	EAU DE T	OILETTE, in 2			Пес	l Flats (	Asso:	rted	Perfun	ies)	***	•••	•••	10/-	,,
24.	,,	"	,, in 4				,,			,,	• • •	• . •	• * * \$	•••	16/-	"
25.	,,	,,	,, in 8	oz.	• • • • • • • • • • • • • • • • • • • •		,,			,,		•••	• • • •	•••	30/-	• •

Owing to increasing demand for Export, we are, by special permission of the authorities, now permitted to manufacture  $in\ Bond$ , and can quote a considerable reduction for quantities of £10 worth and upwards for export.

PON	1ADES,	&c.— (For the Hair).
	,	0.7 7.1/ / *7

		1 0 171		$\mathbf{c}_{i}$	. \				
1.	Savars	Bears' Grease			6d. and 1/	- retail	 •••	4/6 and 8/- p	er doz.
2.	,,	Brilliantine			1'- ,, 2/	6 ,,	 	7,6 ,, 19,-	,,
3.	,,	Cantharidine Cream			6d. ,, $1/$	- ,,	 	3/9 ,, 7/6	,,
. 4.	, ,,	Castor Oil Pomade			6d., ,, 1/		 	3/9 ,, 7/6	,,
5.	,,,	Crystallised Cream			6d. ,, 1/	- ,,	 	3/9 ,, 7/6	**
6.	,,,	Extract of Limes and Gly			6d. " 1	- ,,	 •••	3,9 ,, 7,6	**
7.	. ,,	Family Magnum, large size	ze		1/	- ,,	 •••	8/-	,,
8,	• ,,	Floral Pomades			6d. ,, 1/	- ,,	 • • • •	39 , 76	,,
9.	, ,,	Fossiline Pomades			6d. ,, 1	- ,,	 	3 9 ,, 7/6	**
10.	. ,,	Marrow Oil Pomade			6d. , 1	- ,,	 	39 , 76	,,
11.	٠,,	"May Blossom" Pomade			6d. ,, 1	- ,,	 	3/9 ., 7/6	,,
12.	• ,,	White Fossiline, delicatel	y perfume	ed	1/	- ,,	 	8/-	,,
fm.	- C 7 D	7 1 2 70		7 70		T 7	 7	7 (1 77	- '- CI

The 6d. Pomades are put up in Boxwood Topped Bottles, the 1/- Pomades in Stoppered, and the Floral in Glass Capped Bottles.

### POUDRE DE RIZ (Face Powder)

... 6d. retail; 4/- per doz.

### VIOLET POWDER (SAVARS).

FULLER'S EARTH (SAVARS)

... In packets, 5/6, 11/-, 28/-; in round boxes, 36/- per gross.

EVANS. SONS & CO., EVANS, SONS & MASON (Lim.), EVANS, LESCHER & WEBB,
Liverpool. Montreal and Toronto.

# VGES

WE beg to call the attention of the Trade to our quotations. We invite inspection of stock at our warehouses in Liverpool, and will be happy to send any lots on approval.

,,,	TO TO THE TOTAL TO		110						
			10H	NEYCC	MB.				Per Case.
1	FINEST SELECTED TOILE	г & Ватн	3 to 10 to	b. 30/-, c	r in Cases	10 lb. e	ach abou	t 60 pieces	£14 0 0
	District		3 ,, 10	,, 21/-	,,	,,	,,	60 ,,	10 0 0
3.		**	3 ,, 10	", <del>17</del> /-		11		60 "	8 5 0
4.	", Small for Toilet"	,,	20 ,, 28	,, 17/-	"		"	210	8 5 0
5.	" Small for Tollet		25 ,, 35	10/	**	"	21	200 "	4 15 0
	22 22 22			0/	**	,,	55	/180	3 15 0
6.	" " " " " " " " " " " " " " " " " " "		40 ,, 48	27	"	25	"	Ω/Ι ΄΄	13 10 0
	FINEST LARGE BATH		,,		**	"	**		
8.	FINE ,,		2 ,, 3	" 21 <sub>/</sub> -	• •	**	,,	30 ,,	9 15 0
			Т	URKE	Υ.				
1.	CUPS, for Nursery		. Selected		pieces to I	b			60/- 1b.
2.	01-:1-4	•••		10 ,, 20	,,			•••	70/- ,,
3.	T. D. al.			10 ,, 20					80/- ,,
4.	"		. Finest	10 ,, 20	7,			•••	120/- ,,
۳. 5	Solids for the Nursery		. Selected	20 ,, 30	"				32/- ,,
o,	Solids for the Nursery		. Fine	40 ,, 50	,,				007
6.	" " " " " " " " " " " " " " " " " " "	•••		10 ,, 20	"		••	•••	FO'I
7.	,, Toilct		9,1,-4,3		"		••	•••	601
8.	,, ,,		. Selected		,,		•• •••		יים דיים
9.	"	•••	. Finest		19	•	•••	•••	75/- ,,
10.	Solids, for slates, &c.	• • • •	•• •••	40 ,, 60	**		•••	•••	16/- ,,
11.	" small "	•••		40 ,, 60	**		•••	•••	10/- ,,
			BROV	VN TU	RKEY	7			Per Case.
1	MEDIUM AND SMALL TOI	TET SIZES	10 to 40	nieces to Ih	16/- 1h	or in ca	ses of 7	lb	£5 5 0
					1/1/				4 10 0
۵.	LARGE for Bath, Carriage	s, cc	. 0 ,, 10	"	14/- ,,	"	"	•••	10 0

#### WEST INDIA CLEANED HONEYCOMB

		1116						
No.	0	1	2	3	4	5	6 non dozon	
	9/-	12/-	16/-	22/-	28/-	40/-	52/- per dozen	

#### SPONGES-ON CARDS.

		81.	1/4	2/	2 8	4/-	8'- per doz.
1.	H. Cretail	1d.	24.	3d.	40.	6d.	1/-
	Turkey						

#### SPONGE BASKETS.

LUSTRE WIRE ... 6/-, 8/-, and 12/- per dozen

### SPONGES, MOUNTED.

Baby's Mouth Sponges	′		3/9 p	er dozen
	•••	•••	a' 1 *	ci dozon
Sanitary Sponges		•••	4/-	,,
Mounted Ear Sponges			6/-	,•

SPONGES, THROAT.

Mounted on Silver-Plated Wire, with Two
Finger Rings ... ... 2/9 per dozen

SPONGE BAGS-WATERPROOF.

	1	2	3	4	5	6
	Sizes $7 \times 6$	8 × 7	9 × 8	10 × 9	$11 \times 10$	12 × 11 inches
а. Снеск	6/-	7/-	9/-	11/	12/6	14/6 per dozen
b. India Cloth. Fig. 1.	7,6	9/-	10/6	13/-	15/-	17/- ,,
c. PERSIAN, FANCY. Fig. 2	8/-	1Ó/-	12/-	14/9	16/-	20/- ,,



NEW DESIGNS, Handsome, and very Salcable.



FIG. 2.

	_ 1	2	3	4	5	6	7	8
Size	5를 × 5를	64×64	73×71	8± × 8	9×9	$10\frac{1}{4} \times 10$	$11\frac{1}{2} \times 11$	$12\frac{1}{2} \times 12$ in.
d. Figured Satin, White Proof	7/9	~ 9/- `	10/6	11/3	13/9	16/6	Ĩ8/9	21/9
e. Check Satin	7/9	9/-	10/6	11/3	13/9	16/6	<b>1</b> 8/9	21/9
f. Check Satin, Double Faced	9/3	12/-	13]-	13 9	17/3	18 9	24 6	27 6

EVANS. SONS CO., LIVERPOOL. ST

# As the Season has arrived when the demand for COD LIVER OIL may be expected to increase, we submit the following considerations in favour of the "A 1" BRAND:---

We guarantee its purity, the Livers being carefully selected, and only those of good quality used. The Oil is made at our own Factory, Balstad, Lofoden.

BY A SPECIAL PROCESS THE SOLID FATTY ACIDS ARE REMOVED, so that it remains brilliant at the lowest temperatures, and is more easily digested by invalids.

The sale continues to increase, this season's being the largest we have known by 10 per cent., showing that the Oil is becoming more and more appreciated. The difference in price between this high-class Oil and the usual Oils sold under various names is very small, the "A 1" Oil being now less than 1s. per lb. fluid.

NUMEROUS GOLD AND OTHER PRIZE MEDALS have been awarded the "A 1" OIL at various International Exhibitions.

Chemists who bottle the "A 1" brand are enabled to get a higher price for it, as they may say, without hesitation, that it differs considerably from Oils sold by Stores and the generality of cutting Druggists.

## REASONS BY PHARMACISTS WHY

# THE "A1" GOD LIVER OIL

## SHOULD BE PREFERRED TO OTHERS:

From Lancashire.

"A Winchester of the 'Al' Oil, by the condensed moisture of the air in the window, became, during the night, covered with ice and frozen to the bottom of the enclosure; the Oil was not merely tolcrably clear, but brilliant."

From London.

"My customers say, 'It is nicer, and has more body in it' than auy other make."

From Durham.

"I have not sold any other for thirteen years. Winter and summer I find it everything I could desire."

From Hackney.

"There is no Oil I know which is so pleasant to take or so reliable."

From Lancashire.

"I have been obliged to give the 'Al' Oil the preference, even somewhat against my own inclinations."

From Yorkshire

"Patients who cannot take the usual best qualities can easily take and digest the 'A 1.'"

### OPINIONS OF THE PRESS.

Dr. Ellis, in his valuable work on the "Diseases of Children," published by J. & A. Churchill, page 317, writes:—

"The finest Sample of Cod Liver Oil I have seen came from Messrs. Southall's, of Birmingham."

From the Lancet:—"We can say of this Oil that it appears to us as good as possible. It is wonderful how little of disagreeable taste it possesses."

From the Medical Times and Gazette:—"The most fastidious patient could easily take it and retainit. In the instances in which we have eiven it we have been assured that no disagreeable taste is left after swallowing it."

From the Medical Examiner:—"The Oil is prepared free of solid fats, which are held in solution in most other Cod Liver Oils, thus rendering it far more digestible and palatable to the patient."

# 9s. per Gallon, in Winchester Quarts, to a/c. or by the 25-gallon Cask, 8s 6d. per Gallon, Cask free.

Ten Blue Trade Mark Labels supplied with each Winchester Quart.

THE "EN NORSK FISKER" LABELS, IN COLOURS, ARE NOW SOLD AT 28. PER 100.

NEW CIRCULARS FOR GENERAL DISTRIBUTION.—These give a sketch of our Factory in Norway, built by ourselves for the manufacture of the "A 1" Oil.

The Circulars are supplied free, with name and address of customer.

MEDICAL CIRCULARS, without name, together with neatly-packed Samples of the New Oil, will be sent when required.

Drug, Chemical, and Chemical Apparatus List free on application. Carriage paid on orders amounting to £5 net value.

References required in opening new accounts.

SOUTHALL BROS. & BARCLAY, Manufacturers, BIRMINGHAM.

## For COUGHS, ASTHMA, BRONCHITIS,

INFLUENZA, COLDS, HOARSENESS



The high character of this old Medicine as a sure remedy for

PULMONARY

AND

#### BRONCHIAL DISORDERS

is repeatedly confirmed by the gratifying letters Mr. Powell receives from those who have experienced its great worth.

Counter Bills with Name and Address and Show Cards sent free on application.

Sold by Chemists and Patent Medicine Vendors throughout the world.  $1/1\frac{1}{2}$ , 2|3, and 11| per bottle.

Prepared by THOMAS POWELL, 4 Albion Place, Blackfriars Road, LONDON, S.E.

THE DOCTOR'S CURE.

AN INFALLIBLE REMEDY FOR

ETC., ETC.

2s. 6d. PER BOTTLE.

HENRY, PHŒNIX MANCHESTER.

## MERFI

#### JAMES & CO., 16 Moorfields, LIVERPOOL,

Call the attention of the Trade to their preparation "MALMERFINE." It

Call the attention of the Trade to their preparation "MALMERFINE." It is an undoubted cure for Sea Sickness, giving instant relief in all cases. A Surgeon of Mail Steamers (Walter Dunn, B.A., M.R.C.S., Eng.; L.S.A. Lond., &c.) writes that "It relieves all cases and cures most." Being an artificial Gastric Juice, combined with Stomachic Stimulants, it is also curative in Indigestion and all stomach complaints. Price, 28. 9d. per bottle. Trade price, 23s. per dozen, from Newbery's, Burgoyne's, Goodall, Backhouse & Co., and most Wholesale Houses. The Proprietors will give special terms to first-clas Chemists in seaports who will undertake to push it.

### THE "MALMERFINE" MAGNETIC BELT.

Price One Sovereign, will in nearly all cases prevent sea sickness. Chemists obtaining customers for it are allowed a very handsome commission for their recommendation, and may rely on the Belt giving satisfaction, as it combines all the external means which have been found successful in preventing sea sickness, viz., warmth, magnetism, mechanical pressure on the muscles affected, and absorption of medicinal agents through the pores of the skin. Send for particulars.

Established 1846. Protected by Royal Letters Patent. Registered.

## MANCHESTER COUGH

LOWE'S CONSUMPTIVE & ASTHMATIC

For Consumptive and Asthmatic Coughs, Colds, Bronchitis, Bronchial Affections, Palpitation of the Heart, Hoarseness, Tightness, Wheezing, Difficulty of Breathing, &c. Sold in Bottles, 1s. 11d., 2s. 9d., and 4s. 6d. each.

To be obtained from most Chemists in Town and Country. If any difficulty, the Proprietor, W. LOWE, Chemist, 21 ROSAMOND STREET WEST. and 189 MOSS LANE EAST, MANCHESTER, will send, post tree for 14 stamps, to any address in the United Kingdom.
Wholesale by the following Agents:—MANCHESTER, James Woolley, Sons & Co.; Oldfield, Pattinson (late W. Mather); Thomas Shaw & Co. (late Reddish & Co.); LIVERPOOL—Evans, Sons & Co.; LONDON—Barclay & Sons, §5 Farringdon Street, Ludgate Circus; John Sanger & Sons, 489 Oxford Street; John Sutton & Co., 10 Bow Churchyard; W. Edwards & Co., Queen Victoria St.; Thompson, Millard & Co., Curtain Road, E.C.

## ARE THE BEST AND CHEAPEST.

Attention is called to the following articles:-

MEDICINAL CAPSULES.

	Trade Price.	Retail
Peruvian Mixture Capsules	10/ & 7/6	3/ & 2/
Matico Oil and Copatha do	11/	2/6
Santal Oil do. (36 in each box)		4/
Cubeb Oil and Copaiba do		2/6
Copaiba, Cubeb Oil, and Santal Oil		3/6
Copaiba Capsules, No. 0	5/9	1/6
No 1	5/6	1/3
No 9	57	1/
Copaiba, Alum and Cubebs	5/9	1/6
Coparba, Arum and Cubebs	5/9	
Compound Ferruginous		1/6
Cubeb Oil	23/	3/
Male Fern Oil	10/6	0/
Cod Liver Oil	5/9	1/6
Castor Oil	5/6	1/3
Castor Oil Denoual's Injection (to insure a ra	adi-	
cal cure in two days)	16/	2/9
ALL DRUGS WARRANTED	TO BE GE	NUINE

JULES DENOUAL,

Carlton House, 4 New Cross Road, London, S.E.



## FREEMAN'S CHLORODYNE



THE ORIGINAL AND ONLY TRUE

It is the Greatest Medical Discovery of the present Century, and is regarded as a boon to mankind.

It is the best known remedy for Coughs, Colds, Consumption, Whooping Cough, Bronchitis, and Asthma.

It effectually checks and arrests those too often fatal Diseases-Diphtheria, Diabetes, Fever, Croup, Ague, &c.

It acts like a charm in Diarrhoea, and is the only known Specific in Cholera and Dysentery.

It effectually cuts short all attacks of Epilepsy, Hysteria, Palpitation, Convulsions, and Spasms.

It is the only Palliative in Rheumatism, Gout, Cancer, Toothache, Neuralgia, Sciatica, Lumbago, &c.

It rapidly relieves pain from whatever cause, allays the irritation of Fever, soothes and strengthens the system under exhaustive diseases, restores the deranged functions, stimulates healthy action of the secretions of the body, gives quiet and refreshing sleep, and marvellously prolongs life. It may be taken by old and young at all hours and times, according to the Directions.

It is extensively used by Medical Men in their official and private practice, at home and abroad, who have given numerous written testimonials of

its wonderful efficacy.

#### SPECIMEN TESTIMONIALS.

From John Tanner, M.D., L.R.C.P., M.R.C.S., L.S.A., L.M., Physician to Farringdon Dispensary, London; Physician to the Rev. C. II. Spurgeon's Metropolitan College, &c.

102 HARLEY STREET, CAVENDISH SQUARE, W.

'It gives me great pleasure to bear testimony in favour of FREEMAN'S Chlorodyne. I have prescribed it extensively, and in cases of Asthma, Chronic Bronchitis, the last stage of Phthisis, and the Winter Cough of the aged, I have never found any substitute or chemical combination its equal.

From J. Dodd Swallow, M.D., M.R.C.S., Eng.; L.A.S.; Medical Officer to the London City Missions, &c., &c.
213 CLAPHAM ROAD, LONDON, S.W.
'I have great pleasure in stating that I am constantly prescribing FREEMAN'S Chlorodyne. In Consumption and Asthma, as a Sedative; in Cancer, and in cases of Diarrhea and Dysentery, I am daily witnessing its striking effects, and believe that the thanks of the profession are due to M.F. ENERGY of the offers the bring reconstants. Mr. Freeman for his efforts to bring prominently before the profession so valuable and *reliable* a remedy as the Chlorodyne which bears his name.'

EXTRACTS from the GENERAL BOARD OF HEALTH, LONDON, as to its efficacy in Cholera.

1st Stage, or Premonitory.—In this stage the remedy a its as a charm,

one dose generally sufficient.

2nd Stage, or that of Vomiting or Purging.—In this stage the remedy

ossesses great power, more than any other we are acquainted with, two or

three doses being sufficient.

3rd Stage, or Collapse.—In all cases restoring the pulse. So strongly are we convinced of the immense value of this remedy, that we cannot too forcibly urge the necessity of adopting it in all cases.

Sold by Chemists and Patent Medicine Dealers all over the world, in bottles, 1s. 1½d.; 2 oz., 2s. 9d.; 4 oz., 4s. 6d.; half-pints, 11s.; and pints, 20s. each; and by the Inventor, RICHARD FREEMAN, 70 Kennington Park Road, London, S.E.

Purchasers are cautioned not to have palmed upon them any substitute. See that the Trade Mark, "The Elephant," is on the wrapper, &c., and that the words Freeman's Original Chlorodyne are engraved on the Government Stamp, which is the only true Chlorodyne.

N.B.—Lord Chancellor Selborne, Lord Justice James, and Lord Justice Mellish decided in favour of Freeman's Original Chlorodyne, and against Brown and Davenport, compelling them to pay all costs in the suits. See Times of July 24, 1873.

### COCAINE HYDROCHLORATE

As original makers in this country of Cocaine salts, we beg our friends to note that we are prepared to meet any legitimate competition, and to supply a product of the highest purity and activity as heretofore. We have still further reduced our price, and invite enquiries for quotations.

TANNER & CO., Manufacturing Chemists, TOTTENHAM, LONDON.



PREPARED BEFORE AUGUST, 1875.



## HOP

Are the old-established British Preparation and are "GENUINE HOP BITTERS," made only in Great Britain. Registered and Protected under the Trade Marks Act. They are an excellent aromatic tonic, very palatable, and command a large sale. Put up in bottles to retail at 1/1½ and 2/3, also in packets containing ingredients for making Hop Bitters, 7½d, and 1/1½. N.B.—Each Bottle and Packet bears the above Trade Marks. Beware of Infringements.

MANUFACTURED ONLY BY

ALFRED KING & CO., King's Hop Bitters Depot, Croydon London, S.E.

Telegraphic Address-" KINGHOPBIT, CROYDON."

Special Agents appointed in all parts. Cards, Transparencies and Testimonials supplied. For further particulars apply as above.

Agent for New Zealand, R. Ayres, Chemist, Taranaki, & Molesworth St., Wellington. Small Sample Export Orders for enclosure will receive prompt attention,

An Infallible Remedy and Certain Cure

### URINARY DISCHARGES.

BOTTLES 2/6 EACH.

Depot: J. MUNDAY, Chemist, Cardiff.

London: F. NEWBERY & SONS, 1 King Edward St., E.C.

COLONIAL AGENTS WANTED.

## LIEBIG'S "IODIZED" COD LIVER OIL,

ALMOST TASTELESS.

The powerful curative properties of this Oil have been fully demonstrated by the most eminent Physicians in Europe. It is well put up in Cardboard Boxes, with tasteful, attractive Wrapper, suitable for first-class Shop Window or Counter-case.

Sells:—Imperial Pints, 4s. 6d., Half-pints, 2s. 6d. PRICE DISPLAYED ON BOTTLE, LABEL, AND WRAPPER.

The Trade Mark, "1001ZED COD LIVER OIL," is moulded in the glass of every bottle.

SHOW CARDS AND COUNTER BILLS FORWARDED FREE.

Sole Proprietors:

### J. E. BEESLEY & SONS, 17 Redcross St., Borough, London, S.E.

And through all Wholesale Houses,

#### DR. RENNER'S ESTABLISHMENT FOR VACCINATION WITH CALF 228 MARYLEBONE ROAD, LONDON, N.W.

Vaccination from the Calf Daily from 11 to 12 o'clock.

Vaccination from the Calf Daily from 11 to 12 o'clock.

Reduced Price of Calf Lymph (Daily Fresh):

Tubes, Large, 2/each, or 3 for 5/6; Small, 1/each, or 3 for 2/s.

Points, Large, 1/each, or 3 for 5/6; Small, 9d, each, or 3 for 2/s.

SQUARES, 2/6 each.

Registered Telegraphic Address, "Vaccine London,"

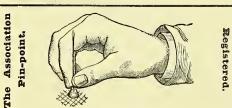
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Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

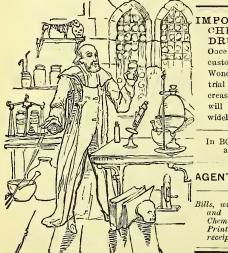
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Plain	Black Currant, old square	8	6
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In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size, From Edwards, London; through any Wholesale House; and from the Manufacturers,

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intermixture, and subdivided with scrupilous exactness. The coating is an intertity tasteless, and odourless compound, which is so transparent, colourless, and thin, that the distinctive colour of each pil is revealed through the coat. No sub-coating is used. The solubility of the coating is not impaired by age. All the officinal pills, as well as any others ordered by the Medical Profession, can be furnished in this form. They can be implicitly relied upon in every respect. The coating, while thoroughly protecting the pill, will not be found to in any way interfere with the action of the drug, and those who have found sugar or chalk-coated pills objectionable owing

have found sugar or chalk-coated pills objectionable, owing

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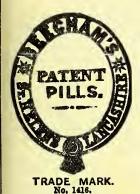
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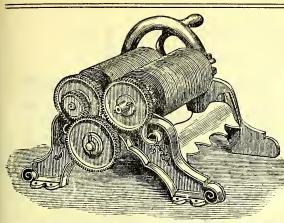
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Liquid Camphor in its natural and most active form. Im-

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FOR THE TREATMENT AND CURE OF ALL

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WINDPIPE, NOSE, & THROAT,

Claims to be a Specific for all Congestive and Inflammatory conditions of the Respiratory
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Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Croup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

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# EARTHENWARE INHALERS

For Hot Water, Infusions, &c.



Fig. 8.

MAW'S IMPROVED.



Fig. 13.

ELASTIC TUBE.



Fig. 100.

MAW'S INVALID.



Fig. 8A.

MAW'S IMPROVED.

Fig. 8:-Marbled, 32s. per dozen.

Fig. 100:-White, 33s.; Gilt Lines, 39s. per doz.

This Pattern is specially adapted for use in bed.

Fig. 8a:-White, 21s. per doz.; Retail, 2s. 6d. each.

ELASTIC TUBES, as Fig. 13, will fit any of the above.

7 inches long, including Mouth-pieces ... ... ... 8s. per dozen.

9 inches long, including Mouth-pieces ... ... ...

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The advantages of this Inhaler are: -1. Simplicity and Cleanliness. The application of the vapour, simple or medicated, to the mem branes not only of the mouth and throat, but also of the nostrils and air passages generally. 3. Perfect ease of inhalation, contrasting with the efforts required in the

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LEDGE, November 28, 1884.

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Marbled, as Fig. 315 ...



Frg. 315.



F1G. 517.

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Dimensions		$7\frac{1}{2} \times 6\frac{1}{2}$	$9\frac{1}{3} \times 8\frac{1}{3}$	$11 \times 9\frac{1}{4}$	13 × 10 <sup>3</sup>	$14 \times 12$	16 × 14
Chamois and flannel	per doz.	7/2	8/	10/6	136	16/	20/
Felt		5/	6/	9/	11/6	14/	20/

#### DOUBLE, for Chest and Lungs, as Fig. 174-

Dimensions, front		No. 1 $10\frac{1}{2} \times 8\frac{1}{2}$ $11\frac{1}{2} \times 8$	$12 \times 9\frac{1}{2}$ $13\frac{1}{2} \times 9\frac{1}{4}$	$13\frac{1}{2} \times 10\frac{1}{2}$ $15\frac{1}{3} \times 10$	$14\frac{3}{4} \times 12 \\ 17 \times 11$	16 × 13½ 18½ × 12
Chamois and flannel	per doz.	20/	26/	32/	39/	48/
Felt		17/	22/6	28/	34/	45/

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No.	1,	Nickel-	plated	*** *** ***		8/6 per doz.	No. 6, Silver-plated, very fine gauze wire front	30/ per doz.
"	2,	Silver- <u>r</u>	plated,	gauze wire front	•••	15/ ,,	7, Gold-plated, perforated plate front	42/ ,,
		,,		perforated plate front			" 8, " very fine gauze wire front	42/ ,,
				gauze wire front		24/ ,,	,, 9, ,, perforated plate front	42/ ,,
29	Э,	"	"	perforated plate front	•••	30/ ,,	Inhaler Respirator, nickel-plated	24/ ,,

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WHOLESALE GLASS BOTTLE MANUFACTURER & DRUGGISTS' SUNDRYMAN, 35, 36, & 37 MOUNT STREET, GROSVENOR SQUARE, LONDON, W.

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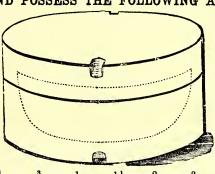
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ARE CLAIMED TO BE THE MOST PERFECT AND CONVENIENT YET OFFERED TO THE TRADE, AND POSSESS THE FOLLOWING ADVANTAGES:—

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4th.—Great attention has been paid to insure accuracy of contents.



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## FEEDING BOTTLE.

(SCREW GLASS STOPPER.)

THE 1s. WHITE GLASS—

WHITE FITTINGS, 7/6; BLACK FITTINGS, 8/6 DOZ.

THE 6d. GREEN GLASS—

WHITE FITTINGS, 4/; BLACK FITTINGS, 4/9 DOZ.

## DR. BELL'S EUCALYPTUS ANTI-CATARRH

OR,

HAY FEVER SMELLING BOTTLE.

RETAIL, 1/1; WHOLESALE, 9/- DOZEN.

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WHOLESALE GLASS BOTTLE MANUFACTURER & DRUGGISTS' SUNDRYMAN, 35, 36, & 37 MOUNT STREET, GROSVENOR SQUARE, LONDON, W.

WILLIAM TOOGOOD'S REVISED PRICE CURRENT of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded free on application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

CHEMISTS AND DRUGGISTS. AGENTS WANTED.

#### HENRY MARTIN A.

For the Radical Cure of Varicose Veins, Weakness, Ulcers, Eczema, and other Diseases of the Leg, and for Injuries of the Knee and Ankle Joints.

By far superior to any of the numerous imitations; are now being sold at less cost than those of other manufacturers

TESTIMONTAL:

From EDWARD C. ANDERSON, M.D., M.A., CANTAB.,

TO MESSRS. Krohne & Sesemann.

Gentlemen,—I have the greatest pleasure in acceding to your request, that I should, from my experience of the Martin's Bandages,

My knowledge of the weighted.

My knowledge of the quality of Bandages of English make is limited; for having, about fifteen months back, applied handages sent to me from this sonrce, and noting the evident irritation and discomfort produced by them—so great, indeed, that each patient soon discontinued their application—I

My knowledge of the quality of Bandages of English make is limited; for naving, amout inceed months back, applied handages sent to the Indianal Source, and noting the evident irritation and discomfort produced by them—so great, indeed, that each patient soon discontinued their application—I ceased to recommend and use them.

In April of this year, I for the first time used the original Martin's Bandage, and since then I have applied them and none else to the limbs of nearly twenty persons suffering from a variety of complaints, such as alcers of the leg of old standing, which had resisted all treatment for more than fifteen years; variosities (the unsound leg of one patient, a man, measured 25 inches round the calf, against 164 inches, the size of the sound leg; and his condition was such that, hefore coming nnder my care, it had been hy his former attendantseriously debated whether or not the leg should be amputated to save life. This man goes about wearing a 21-ioot Bandage, and the calf of the unsound leg now measures 18 inches); erysipelas, ordema, rachitis, &c.

Suffice it that all, hoth young and old, have heen enabled to wear them on account of their safety and the support they give rise to.

I may appear to have said too much in their favour. I can assure you that my feeling is that I have said too little. The great success attending their use evidently arises from the excellent purity, smoothness, impermeability, and non-irritating nature of the Indiarubber of which each Bandage is commondy charged for worthless imitations, which are advertised as "Recommended by Dr. Martin," or as "Suggested by Dr. Martin," which is misleading, the vend rs having not the shadow of a title to use Dr. Martin's name in connection with their bandages. Each Genuine Bandage stamped with Dr. H. A. Martin's signature is warranted to be perfect in every respect, and to wear well.

For the Leg from the Foot to below Knee —No. 1, thick, 7(3; No. 1A, medium, 6/; No. 1B, thin, 4/3.

For the Leg from the Foot to below Knee —No. 3,

SUBJECT TO 20 PER PRICES CENT. DISCOUNT.

Special Terms for Export to Shippers and Colonial Agents.

For other sizes see complete Price List; also Dr. H. A. Martin's Pamphlet, describing Method of Treatment, which are sent Post Free on application to the Sole Wholesale Agents for Europe, Asia, Africa, and Australia,

#### SURGICAL 8 & 38, DUKE STREET, MANCHESTER SQUARE, LONDON.

Also Sole Agents for the Sale of Dr. H. A. Martin's Adhesive Plaster. Agents for the International Society for the Manufacture of Wound Dressing Materials (Limited), Schaffhausen. Patentees of Dr. Siegle's Steam Spray Inhaler, the New Pliable Metal Temperature Regulators, and Dr. Paquelin's Thermo Cautere, &c.

WHOLESALE and for EXPORTATION, of TRUSSES, SUSPENDERS, ELASTIC STOCKINGS, and SURGICAL BANDAGES OF ALL KINDS.

BEST GOODS LOWEST TRADE THE VERY PRICES. Illustrated Price List post free to any Address. The Largest Shipper in the Trade.

ESTABLISHED 50 YEARS.

CAUSEWAY, NEWINGTON LONDON.

Wholesale and for Exportation. Illustrated Price List post free.

LUDGATE GRACECHURCH STREET, E.C. HILL, and 40 ESTABLISHED YEARS 55

ST-DALMAS' LEIGESTER ON FINE FLESH COLORED CAMBRIC

SURGEONS ALI ED BY OVER USED

THE "LEICESTER" SPREAD & MARGINAL PLASTERS, POROUS PLASTERS, MUSTARD PLASTER, CORN PLASTERS &c., &c.

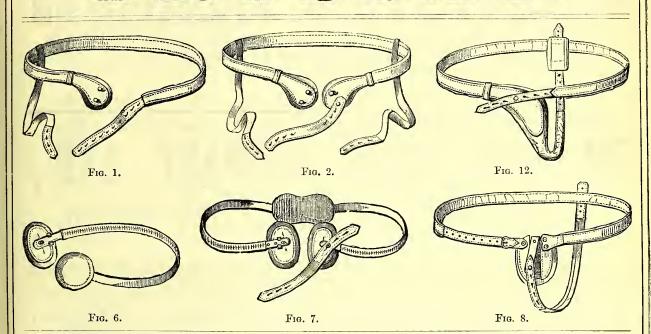
BEST QUALITY.

FRANCIS'

REGISTERED TRADE MARK. Best preventive and cure of Bronchitis, Asthma, Winter Cough, Tight Breathing, and all Throat Complaints. 134d. and 2s. 9d. MANUFACTURED BY

A. de ST. DALMAS, LEICESTER. Formerly MOOR.

# TRUSSES.



Having considerably increased our facilities for the manufacture of TRUSSES, we are enabled to effect an important economy in production, and have pleasure in submitting revised prices at foot. We warrant every Truss we supply to be of the very best quality of its kind, and shall be pleased to execute sample orders, to enable purchasers to compare our Goods with those of other Manufacturers, being confident that the advantages we proclaim will prove to be incontestable.

Cat. No.	SINGLE.		DOUBLE.
1369. Inguinal, Circular Springs (Figs. 1 and 2), covered with Basi	l s. d.		s. $d.$
and Moleskin per doz	. 18 0	•••	31 <b>0</b>
1369 <sup>D</sup> . Ditto, ditto, Roan and Moleskin,	16 <b>0</b>		30 O
1371. Ditto, ditto, Calf and Moleskin,	32 <b>0</b>	•••	52 <b>0</b>
1376. Ditto, Salmon & Ody's expired principle (Figs. 6 & 7) ,,	33 <b>0</b>		66 <b>0</b>
1375. Ditto, Moc Main Lever (Fig. 8) each	6 6	•••	10 6
1381. Scrotal, covered with Basil and Moleskin (Fig. 12) per doz	. 48 <b>0</b>		84 <b>0</b>

TERMS AND DISCOUNT AS USUAL.

SPECIAL QUOTATIONS GIVEN FOR QUANTITY.

## LYNCH & CO., ALDERSGATE STREET,

LONDON, E.C.

AUSTRALIAN BRANCH:—
15 VAUGHAN'S CHAMBERS, 48 QUEEN STREET, MELBOURNE.
TELEGRAPHIC ADDRESS—"LYNCHGATE LONDON."

### CO.'S JAMES E

(FIRST ESTABLISHED)

Are supplied direct or through the PATENT MEDICINE HOUSES.

Small quantities are conveniently sent by PARCEL POST.

FOR ILLUSTRATED GUIDE AND PRICES APPLY TO

THREADNEEDLE STREET.

PHOTOTYPE RECESS

Adapted to their series of SHOP ROUNDS, ETHER ROUNDS, CAPPED OILS, SYRUP BITLES, EARTHENWARE JARS, and DRAWER LABELS.

THESE Labels present many advantages over those written by hand, as the PHOTOGRAPHIC LETTERING is much more PERFECT and REGULAR and surpasses anything of the kind which has been yet produced. duced.

RECESS LABELS are practically INDESTRUCTIBLE and DO NOT SUFFER IN DUSTING OR CLEANING, owing to the fact that the lettering or device is placed upon the BACK of a piece of glass, which is then firmly cemented into a recess sunk in the bottle. The label is therefore effectually protected from injury by handling, or by acids or other corrosive liquids

running down the bottle. The usual pattern of recess label consists of any black phototype letters on a white ground, which is edged with scarlet and gold, the latter pickel out with black lines.

POISON BOTTLES, however, are frequently prepared with a red ground in the place of the usual white ground.

The Company will be glad to supply on application printed lists of these labels, so that intending purchusers may save themselves much trouble by marking the names of the labels required.

BEST WHITE FLINT OVAL DISPENSING OR PERFUMERY BOTTLES. 4 6 8 oz. 8/6 9/6 10/6 per gross.

BEST WHITE FLATS.

PILL BOTTLES (Metal Screw Caps).

½ oz., 9/; 1 oz., 10/; 2 oz., 13/; 3 oz., 16/ gross. POMADE BOTTLES (Metal Screw Caps).

1 oz., 11/; 2 oz., 14/6; 3 oz., 18/; 4 oz., 21/ gross.

Our Metallic Capsules are superior to anything in the Market.

3 4 6 8 oz. 7/ 8/6 9/6 10/6 per gross.

[FISHERGATE, YORK, NOV. 1885.]

#### GLASS BOTTLES, GREAT REDUCTION TWENTY-FIVE YEARS.

ESTABLISHED ROUND SHOULDER OR LIME JUICE BOTTLES 1 1 2 3 4 6 8 10 12 16 20 0z. 2/9 3/3 4/6 6/ 6/6 7/6 8/6 14/ 15/ 20/ 22/ per gross

VIALS (Long, Mcdium, or Short Series). oz., 2/8; 1 oz., 3/; 2 oz., 4/6 gross. Good quality.

KALI (CONFECTIONER'S) BOTTLES.

6 8 10 12 20 oz. 7/6 9/ 14/ 17/ 24/ gross, GLASS SYRINGES (Best Quality).

1 oz., 14/; 1 oz., 18/; 1 oz., 27/; 2 oz., 49/ gross.

All and every kind of Bottle made, and prices given for any particular pattern.

[SPECIAL PRICES ON APPLICATION.]

FEEDING BOTTLES: [SPECIAL PRICES ON APPLICATION.]

for any particular patterns.

[SPECIAL PRICES ON APPLICATION.]

FEEDING BOTTLES: [SPECIAL PRICES ON APPLICATION.]

Best White Glass, China Tops, White Indiarubber Fittings, 27/ gross; Black Indiarubber Fittings, 42/ gross.

Curved, with Screw Caps, White Indiarubber Fittings, 36/ gross; Black Indiarubber Fittings, 42/ gross.

N.B.—The fittings for above Screw Feeders are made in Glass (no Metal or Earthenware).

SELTZOGENES: 5 pin SYPHONS: Block Tin Mounts, best in the trade, 19/ doz. f.o b. Antwerp. SELTZOGENES: 5 pint, 14/ each

J. & J. LANG, Glass Works, Alsace and Lorraine. 37 Quai Flamand, ANTWERP; and 28 Rue Notre Dame de Nazareth, PARIS.

LONDON, SHOWROOMS AT HATTON GARDEN, E.C.



[FOR DISPENSING TOOTH PASTE, COLD CREAM, & OTHER PURPOSES.

PRICES:  $\frac{1\frac{1}{2} \text{ oz.}}{1/10}$ 2/1 3/4 per doz.

Manufacturers of Ship and Family Medicine Chests of every description. All kinds of Bottles for Chemists' and Perfumers' use kept in stock or made to order.

14 TABERNACLE ST., & 1 & 2 HILL ST., FINSBURY, LONDON, E.C.

PRIZE MEDALS, INTERNATIONAL EXHIBITIONS.



LONDON, 1862.



PARIS, 187



PHILADELPHIA, 1876.



PARIS, 1878.



SYDNEY, 1879



MELBOURNE 1880.

# KILNER BROTHERS,

MANUFACTURERS OF



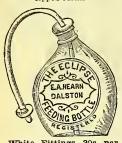
KILNER

BROTHERS,

No. 3 GT. NORTHERN GOODS STATION, KING'S CROSS, LONDON.

### Feeding Bottles.

THE " ECLIPSE." Fitted with Boxwood or China topped Corks.



White Fittings, 30s. per best Black Fittings, per gross.

Fitted with best Screw Glass Stoppers, 6s. per gross extra, The above are put up in one dozen wood-partitioned boxes.

Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

# HEARN, RIDDELL & CO.,

KINGSLAND ROAD. LONDON.

GLASS BOTTLES of EVERY DESCRIPTION, either PLAIN or STOPPERED, made in WHITE, BLUE, AMBER, ACTINIC GREEN, or any other colour required.

SCREW NICKEL CAPPED POMADES, HONEY POTS, JELLY JARS, &c., &c.

SPECIAL ATTENTION GIVEN TO QUALITY. Quotations Post Free to any part of the world on Application.

The above will be found the BEST and CHEAPEST House in the Trade.

Feeding Bottle.

Fittedwith best Porcelain Caps or Screw Glass Stoppers.



White Fittings, 78s. per gross; Black Fittings, 84s per gross.

Fach Bottle, with two Brushes, in handsome cardboard box, bear-ing our Copyright Label.

Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

THE PROPRIETORS OF THE

## "W" BRAND DISPENSING BOTTLES

Beg to call the attention of their numerous supporters to their correct



TRADE MARK

as they learn with regret that inferior bottles have been shipped with a Mark imitating theirs. The Proprietors continue to supply their bottles only through the best London Wholesale Houses, as heretofore, and give notice that they will take action against makers using a colourable imitation of their Trade Mark.

Sozs., 10ozs., 13 ozs., 20,0zs.

#### FRENCH SCREW GLASS POTS & BOTTLES,

WITH METALLIC NICKELLED CAPSULES.

The above new method (first introduced by G. V. De Luca) excels all others for neatness and elegance, and is specially adapted for export. Made in various new designs. Spécialité for Bottles for all kinds of Confectionery, Essences Manufacturers and Sundries. N.B.—Beware of imitations sold at cheap prices, the capsules being a mixture of lead or tinned iron.

Manufacturer of the GLASS POMADE POTS WITH GLASS COVERS, in Opal White and White Flint in all sizes.

G. V. DE LUCA, French Flint Glass Manufacturer, 6 and 7 Long Lane, LONDON, E.C. WHOLESALE AND EXPORT AGENTS—S. MAW, SON & THOMPSON, 7 to 12 ALDERSQATE STREET, LONDON, E.C. Illustrated Catalogue for Patent Screw Capsule on application.



VITRIFIED LABELS (burnt in)

(Black letters on a ground of pink or white enamel). Narrow-mouthed and Wide-mouthed Bottles, well stoppered; Capped and Tube-stoppered Oil Bottles; Syrup Bottles, with Plug Stoppers of Dark Blue or White Opaque Glass; Lozenge Jars with Cut Glass Knobs; Cut Perfume Bottles, Round, Oval, and Square; Shop Jars of Best Porcelain, thoroughly Greaseproof. Labels Indestructible and of elegant Appearance, forming an even surface with the Glass or Porcelain. PRICE LIST ON APPLICATION. A Large Variety of Samples on Show at



**ESTABLISHED** 

1814.

H. POTHS CO., SZ 4 SUGARLOAF COURT, 50 LEADENHALL STREET, LONDON, E.C.

Amongst others the following have heen supplied with these Bottles and Jars:—Bathe, F. G., Chiswick; Bradford & Co., Bridlington Quay; Birks, N. & W. H., Adelaide, S.A.; Breary, W. A., & Son, Douglas, Isle of Man; Brown, Alex., Dunoon, N.B.; Chandler, J. W., & Co., Bridgetown, Barbadoes; Corry, T. C. S., Dr., Belfast; Cottingham, W., Lincoln; Croyden, E. H., Newcastle-under-Lyme; Davis, Hayton, High Harrogate; Dorcvan, Richard, Blackrock, near Duhlin; Durrant, G. R., Hertford; Hall, Ralph, 552 Kingsland Road, London, N.; Hill, J. B., Auckland, N. Z.; James J., 170 New Cross Road, Camberwell; Jones & Co., Christchurch, N. Z.; Lofthouse, J. Fleetwood; Morris, Banks & Co., Birmingham; Okenden, J. Moorfields; Philp, J., 2 Market Place, South Fulham; Roberts, D. P., Croydon, Surrey; Robinson, C. J., Streatham, London; Taylor, P. N., 14 Basinghall St., London, E.C.; Tremeer, J. J., Barnstaple; Waterall, Geo., & Sons, Nottingham; Wilson & Sons, Harrogate.

DEPOT OF THE PATENT SAFETY SAMPLE AND PARCELS POST BOX CO., LIMITED.

**ESTABLISHED** 1814.

STREET, HOWARD Manufacturer of all kinds of SURGICAL INSTRUMENTS AND BANDAGES.

SINGLE TRUSSES, 12/- DOZ.; DOUBLE DO., 21/- DOZ.

N.B .- All my Trusses are made exact shape to the body, and made from Best Sheffield Steel. For quality and price they are unequalled.

1884.

Exhibition,

Calcutta

Highest Award,

Obtained I



# BREFFIT'S



(LIMITED)

# AIRE & CALDER BOTTLE CO.

GLASS BOTTLES.

GLASSWARE SUNDRIES.

DISPENSING BOTTLES.

NEW SERIES-FLATS AND SQUARES.

SCREW STOPPERED BOTTLES

IN GREAT VARIETY.

OUR

# PATENT AERATED WATER BOTTLES

OF IMPROVED MAKE AND FINISH, WITH BEST QUALITY STOPPERS AND RUBBERS, ARE NOW IN GENERAL USE.

SCREW NICKEL CAPPED POMADES,

IN WHITE GLASS, ALSO IN WHITE AND BLUE OPAL.

THE REGISTERED
"INTERNATIONAL" FEEDING BOTTLES

FITTED WITH SCREW GLASS STOPPERS.

PERFUMERY BOTTLES.

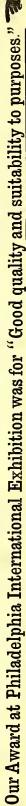
SEVERAL NOVEL AND ATTRACTIVE PATTERNS ADDED THIS MONTH.

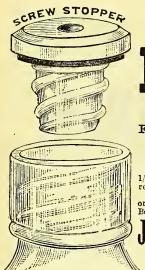
SAMPLES, PRICES, ETC., UPON APPLICATION.

OFFICES AND EXTENSIVE SHOW ROOMS-

83 UPPER THAMES ST., LONDON.

(Close to Cannon Street and Mansion House Railway Station.





# GLASS SCREW STOPPERED FEEDING BOTTLES

ARE THE CLEANEST, CHEAPEST, AND BEST.

Fitted with best Black India-rubber Fittings, boxed & handsomely labelled

PRICES:

6d. 1/ 1/6 each. | 3/6 7/ 9/ per dozen. | 36/ 72/ 96/ per gross.

The 6d. size are in 1-doz, wood boxes. The 1/ size are in separate card boxes with Bottle and Tube Brushes. The 1/6 size have extra length of Tubing and extra Fittings. A sample order sent for enclosure or as directed on receipt of P.O.

Ordinary "Feeders," Green Glass, Bent Neck, Boxwood Top Corks, White India-rubber Fittings, 24/per gross, or with Black Fittings, 28/per gross. The same with White Glass, 3/per gross extra. If packed in 1-doz. Wood Boxes, 2/per gross extra.

J. S. SIMCOCK, Feeding Bottle Manufacturer, 311 GOSWELL ROAD, LONDON, E.C.

# E. CETTI.

WHOLESALE MANUFACTURER OF METEOROLOGICAL INSTRUMENTS.

Mercurial and Aneroid Barometers, Thermometers. Rain and Vacuum Gauges. Makers fall the latest improved Clmical Thermometers, Gas and Water Analysis Apparatus (Franklana's, M'Leod's, and Thomas's), Mercurial Pumps of all kinds, Chemical and Scientific Apparatus for Analysis and Laboratory use.

A large assortment of Graduated Measures and Funnels always in stock. Special designs in Glass Blowing carried out on the Premises.

36 BROOKE ST., HOLBORN, LONDON. Glass Works: PRATT ST., LAMBETH.

# SPECIAL NOTICE. TIKHEL. TIKHEL. 1/12 SIZE.

The Proprietors of Tikheel have now definitely arranged to introduce, on 1st November next, a small bottle of this popular remedy in response to a widespread demand.

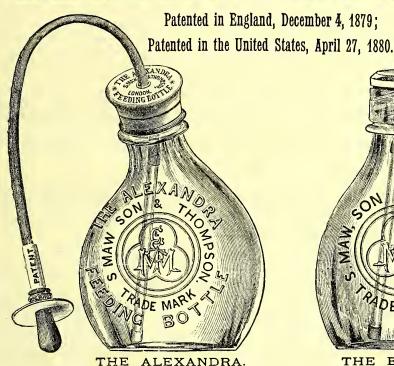
Show Cards and Handbills announcing this fact will be forwarded to any of the wholesale patent medicine houses on receipt of a postcard from any druggist in the United Kingdom. The half-crown size will be continued as heretofore.

Price 10/6 & 24/- per dozen, subject to usual patent medicine discount.

PREPARED FOR THE PROPRIETORS BY

CLARKE, BLEASDALE, BELL & CO., YORK, ENGLAND.

# S. MAW, SON & THOMPSON'S





THE ALEXANDRA. (Earthenware Cap.)

EXPORT. (Glass Screw Stopper.)

	Whit	e Fitti	ings.	Black Fittings.			
Alexandra, Earthenware Caps p	er doz.		7/6	11/-	_	8/6	12/-
Alexandra, Earthenware Screw Stoppers			11/-			12/-	
Alexandra, Glass Screw Stoppers	4/-	7/6	11/-	4/9	8/6	12/-	
Export, China or Wood Top Corks	,,	3/4			4/-	_	
Export, 2nd Quality, Wood Top Corks	,,	2/9	-	_	3/6		
Export, Earthenware Caps	,,		7/3	_	_	8/3	_
Export, Glass Screw Stoppers	4/-	7/6	-	4/9	8/6	-	
		1		1		1 4	

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 69 AND 70.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

MAW, SON & THOMPSON, LONDON.

GAMGEE

(PATENT ARSORBENT GAUZE AND COTTON WOOL,)

**ABSORBENT** COTTON WOOL.

ROLL BANDAGES.

SURGEONS' LINTS, COTTON WOOLS, AND BANDAGES,

BRIDGE MILLS.

NEAR CHESTERFIELD.

Derci-55 Fann Street, Aldersgate Street, London.



TRADE MARK.

POWELL & BARSTOW, 5 Albion Place, Blackfriars Bridge, S.E. LATE

W. HURLSTONE &

BLACKFRIARS ROAD & VINE ST., S.E., Established 1830,

Manufacturers (to the Wholesale Trade) of

ELASTIC GUM SURGICAL INSTRUMENTS.

LAM

Prize Medals, Sanitary Congress, 1878; Industrial Exhibition, York, 1879; Certificate of Honour, Sanitary Congress, 1879; Brighton, 1881; International, 1881; Kensington, 1882.

PATENTEES AND SOLE MANUFACTURERS,

LONDON. ROAD.

Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either ror Water or Air, fitting into a case which keeps them side by side, but slightly apart.



ITS ADVANTAGES OVER

ORDINARY WATER

OR

AIR BEDS ARE AS

FOLLOWS :-

 In cost it is less expensive.
 It is warm and light, and well adapted for a camp or field-bed, being waterproof.

a. It is quickly filled and easily adjusted.

4. It admits of ventilation in the space between the tunes.

5. It can be regulated so as to relieve pressure from any part required.

6. By the addition of tubes it will raise one part of the hody higher than the rest.

7. By the temporary removal of one or two tubes it affords room for the introduction of a bed-pan.

the condition of the patient. 9. It is free from noise and snrging, so disagreeable to the invalid on

8. It can be inclined to any angle (even when filled with water) to suit

changing his position on a water-hed.

10. In case of injury to a tube it can he withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed if injured in any part (from heing in one compartment) is rendered useless.

11. In the treatment of insane or paralysed invalids who have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away hetween the tunes.

# HE LIVERPOOL PATENT LINT 60.

MARK STREET MILLS, NETHERFIELD ROAD, NORTH,



LIVERPOOL,

MANUFACTURERS OF

PATENT FLAX AND COTTON LINTS OF SUPERIOR QUALITY,

ABSORBENT, OPEN WHITE, & GREY, BANDAGES, SURGEON'S AND

V.B. QUALITY.

The superior quality of NEWSOME'S ABSORBENT SURGEONS' LINT is universally admitted.

The V.B. Quality is quite pure and of great superficial area and exquisite softness.

The C. Quality is equally absorbent and pure, but stronger in fabric.

Newsome's Bleached Rolled Bandages, 3 in., 2½ in., 2 in. Also Surgical Absorbent Open Bandages. Specially Bleached Grey Carded Cotton Wools, Absorbent and Bleached and Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

Spinner and Manufacturer, Jersey Street Mills, Ancoats, MANCHESTER. London Agents: B. PRATT & CO., Wood Street, E.C.

ESTAB. 1847.

MANUFACTURER OF ALL KINDS OF

Medical, Surgical, Marginal, and Belladonna POROUS PLASTERS, For Home Trade and Export to all Climates,

ISLINGTON SQUARE, SALFORD, MANCHESTER.

SAMPLES AND QUOTATIONS ON APPLICATION

#### APPLIANCES. SURGICAL HAYWOOD'S



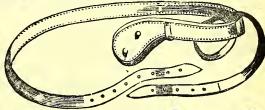
A. Improved Knitted Chest and Back Protector.



B Improved Knitted Chest and Throat Protector.

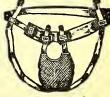


C. Elastic. Stockings.



D. Trusses.

Greatest attention paid to Special Orders, which are invariably forwarded per return of post.



E. Suspensory Bandages.

List of Prices and Directions for Measurement forwarded on application.

J. H. HAYWOOD, Castle Gate, NOTTINGHAM.

# MAWSON & SWAN'S

NEW FILTERS.

SUITED TO EVERY CLIMATE.

# THE MEDIUM

Is arranged in layers of successive fineness, supported on & covered by glass wool, held in position by perforated plates mechanically secured, which can be removed for cleansing or renewing the medium.







# ADVANTAGES.

Perfect graduated Action.

Simplicity. Security.

Easily and economically renewed at home.

No block to become a worn out, choked, or channelled.

No tubes or joints for leakage.

# MAWSON & SWAN, 20 WEST GRAINGER ST., NEWCASTLE-ON-TYNE.

Telegraphic Address-" Weddell Newcastle-on-Tyne."

WHOLESALE AGENTS.—London: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. Williams Toogood; Messrs. Lynch & Co. Manchester: Messrs, Woolley, Sons & Co. Liverpool: Messrs, J. H. & S. Johnson; Messrs Symes & Co. Edinburgh: Messrs. Duncan, Flockhart & Co. Glasgow: Glasgow Apothecaries' Co. Bombay: Kemp & Co., Lim. New Zealand: Kempthorne, Prosser & Co., Wellington, Dunedir, Christonirch, and Anckland.

# HARD WATER.

"THE QUEEN," of October 24th, 1885, says :-- "For softening hard water use the

# 'ANTI-CALCAIRE' POWDER,

QUITE HARMLESS AND INEXPENSIVE."

Sold by the Patentee, P. A. MAIGNEN, 32 St. MARY-AT-HILL, EASTCHEAP, LONDON, In Tins at 2d., 6d., 1s., and 2s., with instructions printed on the tins. Liberal Discount to Wholesale Houses.

# MAIGNEN'S Patent 'FILTRE RAPIDE.'

### TESTIMONIAL FROM LORD WOLSELEY.

I have much pleasure in stating that Mons' Maignen's "Filtre Rapide," which was used by our troops in the Expedition up the Nile, gave very satisfactory results indeed. It filtered the water both quickly and well, and was much valued by our soldiers.

ö Hill Street, W, July 28, 1885.

(Signed)

WOLSELEY.

Full particulars in Pamphlet, "Water, Preventable Disease, and Filtration," to be had from the Author, P. A. MAIGNEN, 32 St. Mary-at-Hill, EASTCHEAP, LONDON.

SAPERE AUDE: "Water is the great carrier of the infective germs." "It is the water to which we must look."—The Lancet, June 30, 1883.

# JUDSON'S "PERFECT-PURITY" FILTERS

GALVANO-ELECTRIC" FILTERING MEDIUM.

(UNDER FOUR PATENTS GRANTED 1884 and 1885.)

RENDER water PERFECTLY Pure; the purifying action of this Medium INCREASES with the IMPURITY of the water-the reverse is the case with ALL other mediums.

ILLUSTRATED PAMPHLET AND CATALOGUE POST FREE.

### THE FILTERING MEDIUM.

Vital princip'e of Filters.

The filtering medium embodies the vital principle, so to speak, of the filtering apparatus. Some kinds of medium actually nourish animalcules, and impregnate water with many kinds of impurity. Of the various sorts of medium in general use we Various Media. may mention the following: - Medicated felt, porous stone and pottery, sponge, leather, pre-pared paper, compressed blocks of carbon, spongy iron, silicate of magnesia, animal charcoal, &c. Among these felt, sponge, leather, and compressed blocks of animal charcoal should always be avoided: they are dangerous. They harbour and propagate animalcules and noxious vegetable growths to an alarming extent. Animal charcoal, whether lease are supported by the statement of whether loose or compressed, is a most unsatisfactory medium. It is obtained by heaving bones from all kinds of sour es and in all conditions sometimes diseased during life, or more or less rotten through *post-mortem* decay. If this heating or charring be insufficiently carried out (as to which there is no guarantee whatever), the char-coal retains sufficient animal matter to render it a source of positive danger, and most of the commercial varieties contain sufficient animal matter to render pure water as impure as if contaminated with sewage.

It is well known, of course, that certain compounds of iron have a very destructive effect on organic matter—as shown by iron moulds on tex-tile fabrics—and chalybeate waters containing these iron compounds naturally are perfectly free from organic impurity; but for domestic use it is essential that the water filtered through such compounds should a terwards have the iron in it removed. This removal is perfectly effected by the "Galvano-Electric" Medium.

Composition of the "Galrano-Electric" Medium.

Conclusion.

The "Galvano-Electric" Medium is prepared from mineral substances only, which cannot, from the mode of their natural formation, contain even vegetable, much less animal, matter. To the beneficial action of that medium there is therefore no counter-action of questionable utility, as is the case with other filtering materials, which have any small amount of good effect greatly counterbalanced by useless or dangerous accompaniments.

Water-health-giving, life-promoting water if neglected and defiled, becomes, inversely, disease-propagating, wide-spreading death. In this manner is the absolute necessity for domestic filtration severely enforced by the immutable laws of nature. Therefore are we surely justified in maintaining that the benefits are incalculable to be derived from the use of our "Perfect-Purity Filters" and "Galvano-Electric" Filtering Medium.

A VISIT TO OUR SHOW-ROOM AT Nº. 58 SOUTHWARK STREET. LONDON, S.E., IS EARNESTLY SOLICITED.

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# SLEITED GARBUN

# SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these port-

able Filters may be

A.—Pocket Filter, 2½ inches diameter,
mouthpiece, in decorated metal-box

SEATED AFILTER CO

ATTERSEA LONDONS

THE SILICATED CARBO



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continnone

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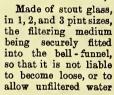
B.—Ditto, 31 inches diameter, in best stoneware C.—Emigrant's, 5 inches diameter, with silver-plated tap ...

G.—Pocket Filter, for carrying over shoulder, as supplied to the
Forces in Abyssinia and Zululand, and to the Ashantee
and Egyptian Expeditions

H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specialty recommended by the Horse Guards for Officers' kits 5 0

# FILTERS.

### TABLE FILTER.





NO. 24.

to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

No. O, 2s. 6d.; A, 4s.; B, 5s. 6d. Engraved Vine Pattern-O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d

#### DINING-ROOM FILTER.

No. 22.

WITH PATENT MOVEABLE BLOCK.

MADE IN MARBLED CHINA.

#### PRICES.

A	 Two Gallons				35s.
В	 Five Gallons	••	••	••	80s.

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

# REFRIGERATOR FILTER.

WITH PATENT MOVEABLE BLOCK.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates, AFFORDING A

COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap .. .. Capacity Two Gallons.

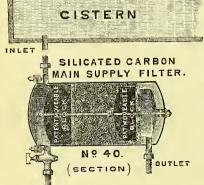
Specially adapted for Tropical Climates.



# MAIN SUPPLY FILTER, NO. 40.

WITH PATENT MOVEABLE BLOCKS,

FOR



CLEANSING TAP.

# MINERAL WATER MANUFACTORIES,

As used by Messrs. Schweppe, London, Liverpool, Glasgow, &c.; and most of the large makers.

Also for Schools, Hospitals, Mansions, &c.

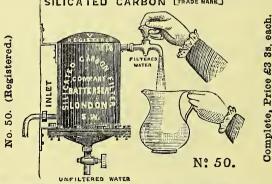
PRICES.

For  $\frac{3}{4}$ -in. Pipes £6 6s.

" 1-in. Pipes

# SUPPLY

WITH PATENT MOVEABLE BLOCK. SILICATED CARBON [TRADE MARK]



These Filters require no attention from servants, as they are always led and ready for use. The act of drawing Unfiltered Water cleanses the filled and ready for use. The act of drawing Unfiltered Water of Eg. Filter, by washing away the impurities collected or the carbon.

FOR FULL PARTICULARS WRITE TO

# UN FILTER COMPANY.

CHURCH ROAD, BATTERSEA, LONDON, S.W.

ONLY GENUINE WITH THIS TRADE MARK.



(Huste-Nicht) L. H. PIETSCH & CO.'S Honey-Herbs-Malt-Extract

Warranted entirely free of all injurious ingredients.

#### **THOUSANDS**

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From the Society of the Red Cross for Nursing Sick and Wounded Soldiers in St. Petersburg,

Under the Patronage of Her late Imperial Majesty the Empress of Russia.

Madame ADELAIDE RISTORI.
Right Hon. W. E. GLADSTONE. M.P.
Right Hon. JOHN BRIGHT, M.P.
Right Hon. JOHN BRIGHT, M.P.
Right Hon. SIR ARTHUR OTWAY, M.P.
Right Rev. LORD BISHOP OF MANCHESTER,
Right Rev. LORD BISHOP OF SALFORD.
Right Rev. LORD BISHOP OF BRESLAU,
HIS Highaess DUKE ERNEST II., of Coburg-

His Highness DORL Gotha. His Majesty KING CHARLES I., of Roumaniae His Serene Highness PRINCE BISMARCK, Im-perial German Chancellor, His Excellency Field-Marshal VON MOLTKE, His Holiness POPE LEO XIII. &c. &c. &c.

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use than any other.

#### Advantages :--

- 1. It gives the Linen an UNUSUAL STIFFNESS, ELASTICITY, and a BRAUTIFUL GLOSS. No Borax, &c., needed.
- 2. Irons with the GREATEST EASE WITHOUT STICKING to the iron.
- 3. The Linen need NOT BE DRIED after washing, but can be ISONED AT ONCE.
- 4. This Starch containing Nothing Injurious, the Linen is WELL PRESERVED by its

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Honey-Herbs-

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Warranted entirely free of all injurious ingredients.

The Best Remedy for Affections of the Throat, Asthma, Bronchial Catarrh, Bronchitis, Cough, Consumption, &c., &c.

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At 1/9, 2/9, and 4/6 the Bottle. Caramels 1/11 the Bag.

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The CHEAPEST, CLEANLIEST, and MOST EFFICACIOUS POLISHING POWDER Yet introduced for cleaning ALL KINDS of METAL GOODS, SILVER PLATE, GOLD, JEWELLERY, GLASS, &c., &c.

Used in the German Army SOLELY and EXCLUSIVELY since its invention.

Warranted NOT to INJURE the most DELICATE metal work.

Made in six different degrees of fineness, and sold at 4d., 5d., 6d., 7½d., 1s., and 1s. 3d. per package.

On receipt of One Stamp a Sample of each No. will be sent post free to any address by

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Refreshing, Invigorating, Best of all Brands. OPENS WITHOUT CORKSCREW.

THE MOST AGREEABLE DISINFECTANT KNOWN.

THE BEST AND NICEST PERFUME EXTANT.

NONE without this Stamp in RED on

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"Prove all things; hold fast that which is good."

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For Domestic, Trade, and Industrial Use.

Testimonial from United Small Arms Factories, Birmingham.

"The Polishing Powder is in GENERAL use at our Factories, and has so answered its purpose that we have DISCONTINUED all other PREPARATIONS of the KIND, and EXCLUSIVELY USE YOUR INVENTION; the metal is in no way affected by its use; tarnish is easily removed, and the polish which results is lasting and stands well the influence of the atmosphere."

For Trade Prices of any of the above Specialities apply to Wholesale Houses, or direct to

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N.B.-AGENTS APPOINTED.

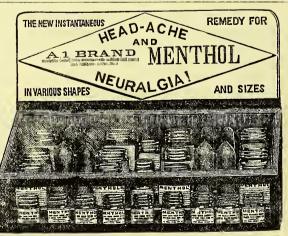
# PURE MENTHOL-A1 BRAND.



A Handsome Glass-fronted Show Case (see diagram below) given away to purchasers of 3 dozen of our Brand. This Show Case is made to hold 3 dozen Al Brand Menthol of any shape or size, the only restriction being that 1 dozen 6d. size be not exceeded in the assortment.

NOW is the time to Stock, as the season is coming on when Neuralgia and Nerve Pains of all kinds are prevalent.

A good Show Case invariably doubles the sale of an article, and all Chemists desirous of increasing their business should entertain this.



The Case is ll in. long by  $5\frac{1}{2}$  in. deep, and the lid lifts, so that the goods can be sold from it, making it both a useful and attractive addition to a Chemist's counter.

See above for prices, illustrations, etc., of separate shapes.

All our shapes can be got through any Wholesale House, or direct from

Al MENTHOL DEPOT: 30 PATERNOSTER SQUARE, LONDON, E.C.

Proprietor—J. G. SHIRLEY.

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Chemists by Appointment to the London Homeopathic Hespital, Manufacturers and Importers of

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SURGICAL & MARGINAL PLASTERS CORN & BUNION PLASTERS,

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Samples and Quotations on application. [1]

### HOMŒOPATH MEDICINES.

THE BRISTOL AND WEST OF ENGLAND

# HOMEOPATHIC MEDICINE SUPPLY.

37 HIGH STREET, BRISTOL.

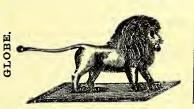
IMPORTANT TO CHEMISTS, PATENT MEDICINE VENDORS, AND HOMŒOPATHIC MEDICINE AGENTS.

In view of the increasing demand for Homcopathic Medicines, and to remedy the present unsatisfactory system upon which Agents are supplied, the Proprietor of the Bristol and West of England Honcopathic Medicines Supply has designed and fitted up for the special use of Agents a Cahinet containing an assection, in hulk, of all the medicines in general use; the Cabinet, which is arranged to stand on any ordinary counter, is fitted with arranged to stand on any ordinary counter, is fitted with arranged to stand on any ordinary counter, is fitted with results filled with Tiuctures, and the corresponding drawer containing 36 four-ounce bottles filled with Pilules—in all, six dozen bottles and 36 kinds of Medicines of the usual strength sold by Homcopathic Chemists; the bottom drawer will contain a supply of not less than two gross of bottles, in cases, two-drachm and half ounce, clean and corked ready for filling, also a supply of labels, and not less than 100 Books or Guides to the uses of the medicines; the price of the Cabinet and contents is £5 net cash, and the advantage to the Agent will at once be seen from the fact that the same quantity of medicines, if put up in the usual way ready for sale, the involce price from the Wholesale House to the Agent would be £18 or therabeut; another advantage to the Agent is, that he will always be in a position to refill Customers' bottles when required. Agents can have the bottles replenished at any time, or new hottles of any medicine, tincture, or pilules will he sent carriage paid at 12s. per dozen. Special quotations for Medicines, ready put up for sale, also for special and proprietary articles.

For further particulars as to terms, &c., apply to the Proprietor of the

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19/- per dozen 15-grain Tubes (guaranteed); Postage, 2d.

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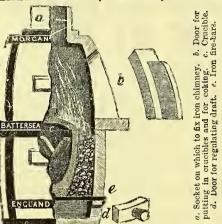
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#### FURNACES. PORTABLE

IRON BOUND. EXTERIOR DIMENSIONS.

For MELTING GOLD, SILVER, COPPER, &c.



	Diam.		Diam.	1	leight.		Hauteur,	For	<ul> <li>Morga</li> </ul>	n's		ric	e ्
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ABCDEF

### MUFFLES.

With or without apertures.

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٥.	Long, in.		Wide, in. 31/2		61		Price, doz. 12/	No G		Long, in. 11		Wide in.		High in.		doz.
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	10		6	::	4	::	27/		•••	.0	••		••	,	••	J 1/

Sizes A to F, also K, are suited for the Furnaces of the same letters.

G to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.

For	ASSAYING DENT	AL WORK, &c.
		MUFFLE FURNACES.
for rt	a (	Fizes F and K are also made
r dd		with an extra large top door

(b) to take a Morgan's Crucible No. 8 (F) and No. 20 (K). for Doo Sur P. 7. 17. e arch. ø. n which to fix iron chimney.

d. Loor of muffle. e. Muffle an
e. g. Door for regulating dr.
for muffle. i. Fire-clay gra MORGAN C t. Socket on we. Muffle. d. I tirring fire. ENGLAND

Exterior dimensions.	Interior dimensions.

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# ASSAY

FOR COPPER.

CORNISH FORM AND QUALITY (JULEFF). High, Hauteur, Diam. Diam.
in. milli. in. milli.
{3\frac{1}{2}} \cdot 083 \quad 3 \quad 077 \quad 2 \quad 051 \quad 2 \quad per doz. Nest of Two  $\begin{cases} 3\frac{1}{4} \\ 2\frac{1}{2} \end{cases}$ Single .. .. 2 ·051 2½ ·064 All sizes and shapes to order.



High, Hauteur, Diam. Diam. milli. in. milli. 3‡ 6/ per doz. Covers, 2/ per doz.

#### FOR TIN.

THE MINT OF THE UNITED STATES AT SAN FRANCISCO, OFFICE OF THE ASSAYER,

SAN FRANCISCO, CAL., April 19, 1877. Sirs,—I have tested and used the Assay Crucibles and Annealing Cups, and can with assurance recommend their superior quality and durability. Respectfully yours, &c ,
O. D. MUNSON, Assayer.

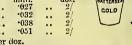
# CRUCIBLES.

FOR LEAD.

5 in. diam., '077 diam. milli, with Cove rs, 2/3 per doz. Other sizes to order.



THESE ARE PERFECTLY SMOOTH AND OF THE CORRECT POROSITY. Per doz. 2/2/2/2/ Diam. in. Diam. milli. •027 •032 Hauteur, milli. '027 '032 Height. ABCD .038 .038 045 .051 Covers for either size, 6d. per doz.



AACHEN, July 23, 1850.

For several years past I have used Fire Clay Assay Furnaces, Muffles, and Crucibles made by the Patent Plumbago Crucible Co., Battersea Works, London, S.W., and am so thoroughly satisfied with them that I strongly recommend this manufacture to all laboratories, refiners, and smelting works.

PROF. DR. DÜRRE, (Signed)

Der Körigl Rheinisch Westfälischen Polytechnischen Hochschule.

NOTICE.—Care should be taken in all instances, when ordering, to specify the Crucibles, &c., manufactured by

(Sole Manufacturers of Morgan's and Salamander Crucibles THE MORGAN CRUCIBLE CO. Battersea Works, LONDON, S.W. and Salamander Crucibles

#### HORSE, CATTLE. MEDICINES.

MAJESTY THE OUT

BY ROYAL APPOINTMENT.

DAY, SON

By Special Warrant, Dated 27th December, 1865. INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant, Dated 10th February, 1866.

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs,

Patronised for over 50 years by the nobility and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 Medicine Chest contains the following matchless remedies:—
"CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
"GASEOUS FLUID," for Colic, Scour, or Diarrhoa, and Debility.

"GASEOUS FLUID," for Colic, Scour, or Diarricea, and Debnity.

"RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.

"RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.

"BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.

"GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest No. 2, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s.

Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS OF THE BRITISH ISLES.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, 1871; President's Medal, Spalding, 1872; Silver Medal, Manchester and Salford Show, 1874; Silver Medal, Preston, 1875; Silver Medal, Stamford, 1875; Silver Medal, Crewe, 1875; Special Prize, National Agricultural Society of Victoria, Australia, 1875; Medal, Chester, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, North Berwick, 1878; Medal, Dalry Show, London, 1878; Silver Medal, Newsattle-on-Tyne, 1877; Silver Medal, Bertham, 1880; Medal, Melbourne Exhibition, 1880; Silver Medal, Scourbridge, 1881; Silver Medal, Doncaster, 1882; Gold Medal, Christchurch, New Zealand, 1882; Silver Medal, Canterbury, 1882; Silver Medal, Kettering, 1883; and Medal, Amsterdam

CAUTION.—Beware of Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W. And sold by Messrs. Burgoyne, Burbldges & Co., Barciay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, Hovenden & Sons, and all Wholesale Oruggists, in London: Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland: Fairthorne & Co., Launceston.

(Manufactured by R. J. JAMES, the Grandson of the Inventor).

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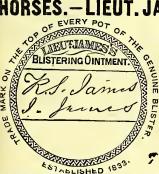
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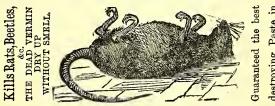
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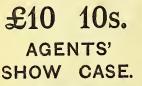
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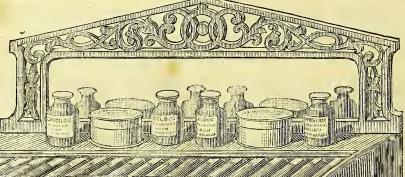
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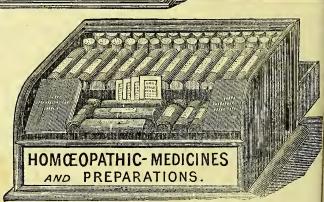
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